

Attachment 3

FEMA Rugged Base Performance Requirement Matrix

5/1/2014

Attachment 3 : FEMA Rugged Base Performance Requirement Matrix

Summary and Overview

In the FEMA Rugged Base Performance Requirements (Section J: Attachment 3) there are series of numbered *shall*'s ("*shall* (#)"). For each numbered *shall* ("*shall* (#)")., the contractor will have to fill and submit the FEMA Rugged Base Requirements Matrix(Section J :Attachment: 3) to demonstrate compliance.

The final version of the FEMA Rugged Base Requirement Matrix shall be submitted as required in Section M and shall indicate to what version of FEMA Rugged Base Requirements the Offeror is providing responses.

Every other *shall* in the solicitation or in this document will have to be met, however only the numbered *shall*'s ("*shall* (#)") will be in the Rugged Base Requirements Matrix (Section J :Attachment: 3).

Instructions:

Column 1	Column 2	Column3	Column 4	Column 5	Column 6
Section Number and Title	FEMA Requirement: (" <i>shall</i> (#)").	FEMA Requirement compliance	Description	Location	FEMA acceptance

Column 1: Section number and title

The "Section" Column indicates the section number and title of a requirement in the Rugged Base FEMA requirements (Section J : Attachment 2)

Column 2: FEMA requirements

The "FEMA Requirement" would have to be filled out with the numbered Requirements from the Rugged Base Requirements (Section J: Attachment 2)

Column 3: FEMA Requirement compliance

The manufacturer is required to state for each FEMA requirement in Column number 2 if the manufacturer met the requirement (Yes/No/ N/A)

Column 4: Description

22 The manufacturer is required to provide a description to demonstrate of the FEMA Requirement (*shall*s). This should not be restating the requirements (shalls),
 23 but if not a detailed explanation and/or description on show the vendor Met/ Not met or N/A

24 Column 5: Location

25 The manufacturer has to indicate where in the Proposal the manufacturer shows compliance and/or demonstrate what is stated in the description. The manufacturer
 26 shall provide as much details as possible to ensure that it provide adequate information to the evaluators.

27 Column 6: FEMA Acceptance

28 FEMA indicate if the vendor met the requirement

29 *Example: NOTIONAL DATA, Just to provide guidance*

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Section Number and Title	FEMA Requirement: ("shall (#)").	FEMA Requirement compliance YES/NO/N/A		Description	Location	FEMA acceptance
7.5.4 Microwave Oven	Each unit <i>shall</i> (98) include a 1.2 c.f. microwave (minimum) with child lock unless this requirement is met through the use of a combination microwave / hood / fan / light)	3 bedroom	YES	Each Unit will include a 1.4 c.f. microwave with a child lock .	Refer to Spec Sheet in Tab "X" and Page "X" of the proposal that shows that each unit will include a 1.4 c.f microwave.	YES
		2 bedroom	YES	Each Unit will include a 1.4 c.f. microwave with a child lock	Refer to Spec Sheet in Tab "X" and Page "X" of the proposal that shows that each unit will include a 1.4 c.f microwave.	YES
		1 bedroom	YES	Each Unit will include a 1.0 c.f. microwave with a child lock	Refer to Spec Sheet in Tab "X" and Page "X" of the proposal that shows that each unit will include a 1.4 c.f microwave.	YES
		Express bedroom	YES	Each Unit will include a 1.4 c.f. microwave with a child lock	Refer to Spec Sheet in Tab "X" and Page "X" of the proposal that shows that each unit will include a 1.4 c.f microwave.	YES

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FEMA REQUIREMENT MATRIX

Section	FEMA Requirement: ("shall (#)").	FEMA Requirement compliance	Requirement met Yes , No or N/A	Description	Location	FEMA acceptance
1.0. Compliance With 24 CFR 3280						
1.1 Compliance with 24 CFR 3280 (a.k.a. "HUD Code")	All units <i>shall (1)</i> be built to HUD Code as defined in 24 CFR 3280 & 3282.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All units <i>shall (2)</i> bear the HUD label prior to shipment, ...	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<i>Shall (3)</i> meet any solicitation-specific HUD defined ratings for Wind Zone, Thermal Zone, and Roof Load.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
2.0 Compliance with International Building Code						
2.1 International Building Code (IBC)	Each unit <i>shall (4)</i> include full house wrap meeting the standards set forth in the 2009 International Building Code, Section 1403.2 Weather Protection.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
3.0 Compliance with Uniform Accessibility Standards(UFAS)						
3.1 Uniform Federal Accessibility Standards (UFAS)	All units designated as "UFAS" or "Accessible" <i>shall (5)</i> be fully compliant with UFAS and this document. UFAS "reminders" included throughout these requirements are used to highlight certain standards, but are not all-inclusive,...	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	...the contractor <i>shall (6)</i> be responsible for ensuring full compliance with applicable UFAS requirements.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

4.0 Zoning Requirements						
4.1	“FEMA Northern Units” Manufactured Housing Design Criteria <i>shall</i> (7) be in Accordance with 24 CFR 3280.506 Thermal Zone 3 (a U-Value for Zone 3)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.1.1	Thermal Identification <i>shall</i> (8) have a Painted Blue Draw Bar	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.2	FEMA “Southern Units” Manufactured Housing Design Criteria <i>shall</i> (9) be in Accordance with 24 CFR 3280.506 for Thermal Zone 2 (U-Value for Zone 2)...	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.2.1	Thermal Identification <i>shall</i> (10) have a Painted Red Draw Bar	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.3	FEMA “CONUS” unit <i>shall</i> (11) be able to be deployable in Contiguous United States.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.3.1	Thermal Identification <i>shall</i> (12) have a painted Green Draw Bar	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.4	FEMA Units” (all) Manufactured Housing Design Criteria <i>shall</i> (13) be in Accordance with 24 CFR 3280.305(c) Structural design requirements - Wind, snow and roof loads for Wind Zone III.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
4.5	“FEMA Units” (all) Manufactured Housing Design Criteria <i>shall</i> (14) be in Accordance with 24 CFR 3280.305(c) Structural design requirements – roof load Northern Zone	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
5.0 Size and Configuration						
5.1 Exterior Length	Final dimensions <i>shall</i> (15) be proposed by contractor, but not to exceed sixty feet(60’)(box length)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	Final dimensions <i>shall (16)</i> be proposed by contractor	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	1 bed Final dimensions <i>shall (17)</i> be proposed by contractor	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Final dimensions <i>shall (18)</i> be proposed by contractor, but not less than forty four (44) feet and not to exceed forty eight(48') feet (Box length)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
5.2 Exterior Width	3 bed -Final Dimensions <i>shall (19)</i> not exceed fourteen feet (14') (box width)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	2 bed Final dimensions <i>shall (20)</i> be proposed by contractor, but not to exceed fourteen feet (14')(box width)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	1 bed Final dimensions <i>shall (21)</i> be proposed by contractor, but not to exceed fourteen feet (14')(box width)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Express: Final dimensions <i>shall (22)</i> be proposed by the contractor, but not be less than eight (8') and not to exceed eight feet and one half (8.5') (transport width) Slide out portions of the MHU are not acceptable	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
5.3 Area	Acceptable manufactured home size (Area) for the 3-Bedroom units <i>shall (23)</i> be a maximum of eight-hundred forty square feet (840 sq. ft.)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Acceptable manufactured home size (Area) for the 2-Bedroom units <i>shall (24)</i> be a maximum of seven-hundred forty square feet (740 sq. ft.)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Acceptable – manufactured home size for the 1- Bedroom units <i>shall (25)</i> be a	3 bedroom				

	maximum of five-hundred seventy-five square feet (575 sq. ft.)	2 bedroom					
		1 bedroom					
		Express unit					
	Acceptable manufactured home size (area) for the express unit <i>shall</i> (26) be between a minimum of three hundred and fifty two square feet (352 sq. ft.) and a maximum of four hundred and eight square feet (408 sq. ft.)(Refer to 5.4)	3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
	6.0 Living Room						
	6.1 Furnishing	Each unit <i>shall</i> (27) have a designated, usable living room area.	3 bedroom				
			2 bedroom				
			1 bedroom				
			Express unit				
		Each living room area <i>shall</i> (28) be furnished with one (1) sofa (double/full size mattress with dimensions approximately 54” x 75”), one (1) armchair (constructed of non-permeable material such as wood, without fabric covering), one (1) coffee table, and one (1) end table.	3 bedroom				
			2 bedroom				
1 bedroom							
Express unit							
All furnishing <i>shall</i> (29) be standard sizes and commercially available.		3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
All furniture <i>shall</i> (30) be assembled with all packing material removed from the manufactured home.		3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
Furniture <i>shall</i> (31) be packed in a manner so that it is not damaged during multiple transportations and/or in the unpacking process.		3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
Quality furniture requires good construction (i.e., free of defects) and the futon <i>shall</i> (32) be soft, comfortable (provide comfort or physical relief, free of causing affliction or pain to the occupant), safe, be free of sharp, abrasive surfaces, edges and durable for up to five (5) years in storage and/or eighteen (18) months during occupancy.		3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
All fabric or material used <i>shall</i> (33) sustain rough and tumble usage.		3 bedroom					

	Fabric or material <i>shall (34)</i> meet the federal flammability standards.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All fabric or material <i>shall (35)</i> have stain resistance protection and sustain rough and tumble usage	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		6.2 Telephone and cable television outlets	Cable Television Jack: Each unit <i>shall (36)</i> have a pre-wired television jack installed in the living room.	3 bedroom		
2 bedroom						
1 bedroom						
Express unit						
The cable jack <i>shall (37)</i> be wired to a designated junction box for easy connection by a service provider.	3 bedroom					
	2 bedroom					
	1 bedroom					
	Express unit					
Telephone Jack: Each unit <i>shall (38)</i> have a pre-wired telephone jack installed in the living room.	3 bedroom					
	2 bedroom					
	1 bedroom					
	Express unit					
The telephone jack <i>shall (39)</i> be wired for two lines or a telephone jack with double outlets.	3 bedroom					
	2 bedroom					
	1 bedroom					
	Express unit					
The telephone jack <i>shall (40)</i> be wired to a designated junction box for easy connection by a service provider.	3 bedroom					
	2 bedroom					
	1 bedroom					
	Express unit					
Cable and television jacks <i>shall (41)</i> be placed so that when the wires are plugged in it does not interfere with the usability of the unit and any safety issues such as trip hazards are avoided. At the same time, the jacks <i>shall (42)</i> be placed in a matter that furniture does not have to be moved to access the cable, and telephone jacks.	3 bedroom					
	2 bedroom					
	1 bedroom					
	Express unit					
	7.0 Kitchen/ Dining Room					

7.1 Furnishing	Each unit <i>shall (43)</i> have a designated safe and usable kitchen/dining room area.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The dining room area <i>shall (44)</i> be furnished with dinette table.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The table <i>shall (45)</i> accommodate all chairs listed for the table size below without any extensions or folding portions of the table having to be open (table sizes are listed as the minimum acceptable size.)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Furnishing designated for the dining area <i>shall (46)</i> not have any porous fabric material	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Furniture for the dining area <i>shall (47)</i> be composed of wood.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All dining room area furniture <i>shall (48)</i> be assembled with all packing material removed from the manufactured home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All dining room area furniture <i>shall (49)</i> be secured in a manner so that it is not damaged during multiple transportations or in the unpacking process.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	3 bed- Furniture <i>shall (50)</i> be one (1) table, sized approx. 3' x 6'6", with six (6) chairs to accommodate six (6) adults Note: All chairs <i>shall</i> be the same size and matched	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	2- bed Furniture <i>shall (51)</i> be one (1) table, sized approx. 3' x 5', with four (4) chairs to accommodate four (4) adults Note: All chairs <i>shall</i> be the same size and matched	3 bedroom				
		2 bedroom				
		1 bedroom				

	<p>1 bed- Furniture <i>shall</i> (52) be one (1) table, sized approx. 3' x 5', with four (4) chairs to accommodate four (4) adults</p> <p>Note: All chairs <i>shall</i> be the same size and matched</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
7.2 Cabinetry	<p>The manufacturer <i>shall</i> (54) provide and install upper and lower cabinets</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>Cabinets upper and lower <i>shall</i> (55) be equal to or better than Kitchen Cabinet Manufacturers Association(KCMA) certified cabinets.</p> <p>The contractor have the option to perform self-certification (The contractor shall indicate in the Attachment 3 how the cabinets chosen or built will perform equal or better than the KCMA certified cabinets</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>The minimum acceptable linear inch length for the upper (wall) cabinet <i>shall</i> (56) be thirty-six inches (36").</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>The manufacturer <i>shall</i> (57)explore the option of adding additional upper (wall) cabinets, additional upper cabinets are desirable.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>The minimum acceptable linear inch length for the lower cabinet <i>shall</i> (58)be thirty-six inches (36").</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	An acceptable lower cabinet <i>shall</i> (59) have a single drawer and two doors.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The manufacturer <i>shall</i> (60) explore the option of adding additional lower cabinets, additional lower cabinets are desirable.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The upper and lower cabinets <i>shall</i> (61) have fixed shelving.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All cabinets <i>shall</i> (62) be constructed with a finish compatible with the interior decor	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
7.3 Kitchen Counter Tops	The Manufacturer <i>shall</i> (63) install post formed laminated counter top (the counter top formed from a single piece of laminate that's shaped into a backsplash at the rear and a rounded edge in front) or <i>shall</i> (64) be an industry standard countertop with a back splash property sealed and water resistant to last for both, storage (nominal 5 years) and use (1-2 years).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The minimum size of the backsplash height <i>shall</i> (65) be 4 inches.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All units <i>shall</i> (66) include a minimum of thirty-six inches (36") of continuous counter top space in the kitchen supported by a base cabinet that has a single drawer and two doors.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Kitchen space <i>shall</i> (67) accommodate food preparation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Access to counter top <i>shall</i> (68) be unobstructed.	3 bedroom				
		2 bedroom				

	All surfaces subject to food preparation <i>shall</i> (69) be washable, without open joints or comprised of materials that cannot be sanitized and/or are not suited for long term use	1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
7.4 Kitchen Sink	Each home <i>shall</i> (70) have a completely installed, self-rimming, double bowl, stainless steel sink with one spray nozzle with at least twenty- four inch (24”) extension when extended.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Each sink bowl <i>shall</i> (71) be fitted with a metal strainer basket assembly and an appropriately sized strainer basket.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Kitchen sink <i>shall</i> (72) be a minimum of: 33"L x 22"H Basin depth: 8" Double equal basins	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Hot water and drain pipes <i>shall</i> (73) be insulated to protect against contact unless they are contained in a kitchen sink base cabinet.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Kitchen pipes and fixtures <i>shall</i> (74) have the adequate protection and insulation to avoid causing injuries whether the manufactured home is occupied or not.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Kitchen pipes and fixtures <i>shall</i> (75) have the adequate protection and insulation to avoid freezing.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	There <i>shall</i> (76) be no sharp or abrasive surfaces under the kitchen sink.	Express unit				
		3 bedroom				
		2 bedroom				

		1 bedroom				
		Express unit				
7.5 Appliances	The Contractor <i>shall</i> (77) ensure that all appliances are high-efficiency and Energy Star qualified (The US Department of Energy list of appliances with Energy Star ratings	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The Contractor <i>shall</i> (78) leave in place all labels that are affixed to the appliances and which designate that the appliances are high-efficiency and/or Energy Star qualified.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All appliances <i>shall</i> (79) be unpacked, installed and packing material <i>shall</i> (80) be removed from the manufactured home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	. All appliances <i>shall</i> (81) be secured in a manner so that it is not damaged during multiple transportations or interfere when the unit is occupied.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Items used to secure appliance doors <i>shall</i> (82) be easily removed(i.e., Refrigerator Door ,Oven doors)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
7.5.1 Range/Oven	The contractor <i>shall</i> (83) install a thirty inch (30”) self-cleaning electric cooking range / oven.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	It <i>shall</i> (84) include four (4) burners, a thermostatically controlled lighted oven, and indicator lights that show that the burners are operating or are hot	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Range / oven controls <i>shall</i> (85) be located so that the user does not have to reach across burners to use the range / oven.	3 bedroom				
		2 bedroom				

		1 bedroom				
		Express unit				
	The oven <i>shall</i> (86) have insulation on all sides to prevent excessive heat exposure.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The range / oven <i>shall</i> (87) be secured to the floor to ensure that it is not damaged during multiple transportations, affects the structure of the MHU, interfere when the unit is occupied, compromise safety of the occupants or becomes damaged or damage the MHU unit during transportation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The range/oven <i>shall</i> (88) be secured using a minimum of two brackets.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The range / oven <i>shall</i> (89) be plugged into the receptacle (receptacle for range is flush mounted in the wall behind range). Brackets used can include the typical angle bracket / gusset that supplied with a range / oven and an additional angle bracket / gusset.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
7.5.2 Power Vented Range	A lighted, power-vented range hood <i>shall</i> (90) be installed (one-piece construction) unless a combination microwave / hood / fan / light is installed.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
7.5.3 Refrigerator	Each unit <i>shall</i> (91) be equipped an 18 cubic feet (c.f.) or equivalent frost-free refrigerator with freezer	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The refrigerator <i>shall</i> (92) be secured to the floor. Also, the refrigerator <i>shall</i> (93) be secured at least to one wall stud.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The refrigerator <i>shall</i> (94) be on its own circuit.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The refrigerator <i>shall</i> (95) be able to be opened from the inside. The refrigerator	3 bedroom				

	<i>shall (96)</i> be located so that when the door swings open it does not impede access when approaching from the stove, sink and food preparation area.	2 bedroom				
		1 bedroom				
	The refrigerator <i>shall (97)</i> not be plugged in at time of delivery to FEMA.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
7.5.4 Microwave Oven	Each unit <i>shall (98)</i> include a 1.2 c.f. microwave (minimum) with child lock unless this requirement is met through the use of a combination microwave / hood / fan / light	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
7.6 Laundry Area, Washer and dryer hook up	All Manufactured Homes <i>shall (99)</i> have a laundry area designated for the washer and dryer including the plumbing, electrical connections, and dryer vent.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The washer / dryer area <i>shall (100)</i> be designed to accommodate a standard size side by side washer/dryer (i.e., 27" wide, 36" high and comes out from the wall 29 inches).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The Dryer vent <i>shall (101)</i> have an exhaust to the exterior so that when connecting the dryer duct, the dryer exhaust to the outside.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The Dryer exhaust system <i>shall (102)</i> not terminate under the home.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The Washer and Dryer hookup <i>shall (103)</i> not require any modification to install a washer and/or dryer.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

		Express unit			
	The manufactured home <i>shall (104)</i> not include a washer and dryer	3 bedroom			
		2 bedroom			
		1 bedroom			
Express unit					
8.0 Bedrooms					
8.1 Furnishing	All units <i>shall (105)</i> provide sleeping capacity to accommodate two persons in each bedroom.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	On the floor plan the bedrooms <i>shall (106)</i> be designated as follows: <ul style="list-style-type: none">Master bedroom – Bedroom 1Second bedroom – Bedroom 2Third bedroom – Bedroom 3	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	Bedrooms <i>shall (107)</i> be designated by size with the smallest bedroom being designated with the highest number	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	Each bedroom <i>shall (108)</i> be furnished with the following: Bed(s) for two persons (including mattress, box spring and metal bed frame) defined as one of the following: <ul style="list-style-type: none">Master Bedroom – One standard full size bed (54” x 75”);Second Bedroom – One standard full size bed (54” x 75”);Third Bedroom – Two XL twin size mattresses (each 39” x 80”) placed on a free standing bunk bed frame, and not built into the manufactured housing unit One five-drawer dresser (minimum 48” H x 33” W x 18” D) One nightstand or equivalent	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	In Bedrooms 1 and 2: <ul style="list-style-type: none">One of the short sides of the bed <i>shall (109)</i> be designated as the head of the bed, and that short side <i>shall (110)</i> be placed against a wallOf the three remaining sides, two <i>shall (111)</i> have a minimum of twelve	3 bedroom			
		2 bedroom			
		1 bedroom			

	<p>inches (12”) between the bed and the nearest wall</p> <ul style="list-style-type: none"> The final side of the bed <i>shall (112)</i> have open access of at least twenty-four inches (24”) from the nearest wall 					
	<p>In Bedroom 3:</p> <ul style="list-style-type: none"> One of the short sides of the bed <i>shall (113)</i> be designated as the head of the bed and that short side <i>shall (114)</i> be placed against a wall One long side <i>shall (115)</i> be placed against a wall located perpendicular to the wall where the head of the bed is located There <i>shall (116)</i> be a minimum of twelve inches (12”) between the non-head, short edge of the bed and the nearest wall The final long side of the bunk bed <i>shall (117)</i> be open to the room 	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express Unit				
8.2 Closets	<p>Each bedroom <i>shall (118)</i> have an enclosed closet space (enclosed by a door(s)), with a minimum interior length of thirty-two inches (32”), equipped with a shelf and rod running the length of the closet and supported on both ends, and fully compliant with 24 CFR 3280 (“HUD Code”).</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
8.3 Telephone and Cable Television outlets	<p>Telephone Outlet (“Jack”): Each unit <i>shall (119)</i> have a pre-wired telephone jack installed in each bedroom. The Telephone Jack <i>shall (120)</i> be wired for two lines or be a telephone jack with double outlets.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>Cable Television Outlet (“Jack”): Each unit <i>shall (121)</i> have a pre-wired television jack installed in each bedroom.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>The telephone and cable jack <i>shall (122)</i> be wired to a designated junction box for easy connection by a service provider.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>Cable and television jacks <i>shall (123)</i> be placed so that when the wires are plugged in it does not interfere with the usability of the unit and any safety issues such as trip hazards are avoided. At the same time, they jacks <i>shall (124)</i> be placed in a matter that furniture does not have to be moved to access the cable,</p>	3 bedroom				
		2 bedroom				
		1 bedroom				

	and telephone jacks.					
		Express unit				
9.0 Bathroom						
9.1 Full Bathroom(N on-UFAS)	The contractor <i>shall (125)</i> design and install a full bathroom in all non-UFAS units that meet the following requirements (From 9.1 to 9.1.6) and be only accessible from the common area and not from an individual bedroom.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
9.1.1 Shower and Tub	The contractor <i>shall (126)</i> equip all standard (non-UFAS) manufactured homes with thirty inches by sixty inches (30" x 60") shower / tub with a non-skid surface.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The shower / tub <i>shall (127)</i> be installed in accordance with the shower / tub manufacturer's instructions, and be leveled so that water drains completely	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Contractor <i>shall (128)</i> install UFAS compliant grabs bar in shower / tub area of all manufactured homes.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The manufactured home <i>shall (129)</i> include an installed curtain rod	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
9.1.2 Commode	The manufacturer <i>shall (130)</i> equip the bathroom with a round or elongated bowl.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The commode <i>shall (131)</i> be two piece (Tank and bowl are separate) and be an standard height (approx.14-15") .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The manufacturer <i>shall (132)</i> install UFAS compliant grabs bar in the commode area of all manufactured homes.	3 bedroom				
		2 bedroom				

		1 bedroom				
		Express unit				
9.1.3 Bathroom Sink	The manufacturer <i>shall</i> (133) equip the manufactured home with a wall mounted sink	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The sink <i>shall</i> (134) include a properly plumbed faucet.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
9.1.4 Bathroom Medicine Cabinet	The bathroom <i>shall</i> (135) include commercially available surface mounted medicine cabinet.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The dimensions of the medicine cabinet <i>shall</i> (136) be roughly 15 ¼ inches by 30 inches.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The medicine cabinet <i>shall</i> (137) be installed above the sink.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The medicine cabinet <i>shall</i> (138) have a mirrored door. (a Common practice is that the top of the cabinet box (not the door trim) should be approx. 72 inches off the floor)	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
9.1.5 Bathroom Lighting	The bathroom lighting <i>shall</i> (139) be ceiling mounted, be wall-switched controlled, have dual bulb sockets, have non-breakable shades, and have two(2) compact fluorescent light (CFL) or Lighting emitting Diode (LED) bulb equivalent to sixty (60) watt bulb (120W Total), each, installed. No glass is permitted except for the bulb itself.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	In addition, there shall (140) be light specific to the medicine cabinet and sink .This lighting <i>shall</i> (141) be supplied either by a light fixture placed over the vanity or a light fixture placed in the ceiling above the medicine cabinet/sink.	3 bedroom				
		2 bedroom				
		1 bedroom				

9.1.6 Bathroom Accessories	Other bathroom accessories (including wall mounted toilet paper roll holder and 24 inch towel rack) <i>shall (142)</i> be provided.	Express unit					
		3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
		All faucet assemblies in the home <i>shall (143)</i> include secondary shutoff valves (one for each the hot and cold water supply).	3 bedroom				
			2 bedroom				
			1 bedroom				
	Express unit						
	The bathroom <i>shall (144)</i> have an exhaust ceiling fan	3 bedroom					
		2 bedroom					
		1 bedroom					
Express unit							
9.2 Additional Three Quarters(3/4) Bathroom 3 bedroom unit only	The ¾ bathroom <i>shall (145)</i> include all items listed in the full bathroom numbers 9.1.2 through 9.1.6	3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
	The ¾ bathroom <i>shall (146)</i> not have item numbers 9.1.1 (Shower and Tub). Instead, the contractor <i>shall (147)</i> install a shower. The shower <i>shall (148)</i> have a minimum base of 36” x 36” (threshold). The base of the shower <i>shall (149)</i> be rectangular or squared in shape, and be commercially available (no custom made items).	3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
10.0 Unit Hallways							
10.1 Hallway Width	All hallways <i>shall (150)</i> be a minimum of thirty-six inches (36”) wide.	3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
	Designers and builders <i>shall (151)</i> minimize the overlap of door swings.	3 bedroom					
		2 bedroom					
		1 bedroom					
		Express unit					
11.0 Electrical							
11.1 Electrical System	Electrical systems <i>shall (152)</i> be in compliance with the <i>National Electrical Code, 24 CFR 3280</i> and be able to supply sufficient and adequate Power to the whole MHU without having breakers tripped and/or fire hazard.	3 bedroom					
		2 bedroom					
		1 bedroom					

Heater Specific					
		Express unit			
	All exposed non-current carrying metals parts that may become energized <i>shall (153)</i> be bonded to the grounding terminal or enclosure of the distribution panel board.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	All units <i>shall (154)</i> be ready for hook up to municipal electric service	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The unit electrical service <i>shall (155)</i> consist of a 120 / 240 volts 4-wire panel board, complete with master and branch circuit breakers.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The distribution panel board <i>shall (156)</i> be flush mounted inside the manufactured home in the rear bedroom on the right side of the bedroom (when facing the tongue). The panel board <i>shall (157)</i> be of a dead front, safety type, equipped with thermal magnetic molded case circuit breakers of the quick break type having trip indicators and common trip on all multiple breakers.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	A circuit directory <i>shall (158)</i> be permanently affixed to the inside of the circuit breaker access door. All circuits <i>shall (159)</i> be clearly and legibly identified.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The acceptable amperage <i>shall (160)</i> be as defined below. Amperage <ul style="list-style-type: none"> • 3 bedroom: 200A • 2 bedroom: 150 A(Min) • 1 bedroom: 150A(Min) • Express Unit:100 A(min) Volts: 120/240V	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The contractor <i>shall (161)</i> place the water heater on an individual circuit. This circuit <i>shall (162)</i> be clearly marked and the circuit <i>shall (163)</i> be taped in the off position. The tape <i>shall (164)</i> be labeled: “Water Heater: Do not turn on until	3 bedroom			
		2 bedroom			
		1 bedroom			

	<i>water service is turned on.”</i>					
		Express unit				
11.3 Interior Lighting	All interior lighting fixtures <i>shall (165)</i> be ceiling mounted, be wall-switched controlled, have dual bulb sockets, , have non-breakable shades, and have two(2) compact fluorescent light (CFL) or Lighting emitting Diode (LED) bulb equivalent to sixty (60) watt bulb (120W Total), each, installed. No glass is permitted except for the bulb itself.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Lighting fixtures <i>shall (166)</i> be provided in the living room, kitchen, all bedrooms, bathroom, hallways, and dining area. No glass is permitted.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
11.4 Service Entrance Junction Box	Each home <i>shall (167)</i> be equipped with a hinged, metal service entrance junction box mounted to a floor joist between the I-beam and the sidewall in such a manner that the distance from the bottom side of the junction box to the floor joist is no more than eight inches (8") The junction box <i>shall (168)</i> be mounted at a sufficient distance from the outer edge and beneath the unit to prevent rainwater penetration (A special rain shield <i>shall</i> not be installed.) In addition, the junction box <i>shall (169)</i> be located within ten feet (10') of the right rear (when facing the tongue) of the manufactured home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The junction box <i>shall (170)</i> be rated NEMA 3 at a minimum and the size of the junction box <i>shall (171)</i> be a minimum of 12inx12inx4in.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The junction box selection <i>shall (172)</i> consider all the various angles so that the power cables can be pulled toward the box to get the lug nuts.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The service entrance box <i>shall (173)</i> be connected to the circuit breaker panel using seal tight electrical conduit.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The fittings in the junction box <i>shall (174)</i> be appropriate for copper that may be used to connect the junction box to the electrical service.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	The inlet <i>shall (175)</i> be functional, accessible and does not obstruct access to and/or from the door.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The conductors <i>shall (176)</i> be continuously and appropriately color-coded or coded using colored tape wrapped around both ends of the conductors for a minimum of three inches (3"). Paint is not acceptable for coding wires.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The contractor <i>shall (177)</i> not use aluminum wire to connect the service entrance box to the circuit breaker panel. The contractor <i>shall (178)</i> ensure that the wire used to connect the breaker panel to the service entrance box meets the minimum electrical code(NEC) and/or minimum for the forty-eight (48) contiguous United States and District of Columbia (whichever is stringent) ...	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
11.5 Service Junction Box For Telephone and Cable	Each manufactured home <i>shall (179)</i> be equipped with a telephone and cable inlet. The junction box <i>shall (180)</i> be mounted at a sufficient distance from the outer edge and beneath the unit to prevent rainwater penetration (Note: A special rain shield <i>shall</i> not be installed.) In addition, the junction box for telephone and cable <i>shall (181)</i> be located within four feet (4') of the right rear (when facing the tongue) of the manufactured home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
12.0 Plumbing						
12.1 Plumbing System	The manufactured home <i>shall (182)</i> have at three-quarters inch (3/4”) main water supply inlet pipe and <i>shall (183)</i> be equipped with a metal, three-quarters inch (3/4”) master shutoff valve (gate valve).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The manufactured home <i>shall (184)</i> be equipped with a frost free faucet (hose bib).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	The main water supply pipe <i>shall (185)</i> be comprised of three-quarters inch (3/4”) chlorinated polyvinyl chloride (CPVC) or Cross-linked polyethylene(PEX) and extend from the water heater compartment to a point not more than six inches (6”) below the bottom board of the home. The main water supply <i>shall (186)</i> be equipped with a metal, three-quarters inch (3/4”) master shutoff gate valve or ball valve.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Distribution lines <i>shall (187)</i> comply with HUD code. When using CPVC and PEX, then the piping material used may be run directly to the fixture.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The bathroom and washer / dryer area <i>shall (188)</i> be located within the same area of the home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The contractor <i>shall (189)</i> provide access panels in the walls at all points where plumbing joints exist. The access panels <i>shall (190)</i> match the wall and finish.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	An individual shutoff valve <i>shall (191)</i> be provided at each installed plumbing fixture except for the tub / shower.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All units <i>shall (192)</i> be ready to connect up to municipal water or local water well.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Note: Water piping <i>shall (193)</i> be tested appropriately for the type of piping used. When the manufactured home is delivered to FEMA the entire water system <i>shall (194)</i> be dry without any water in it.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
12.2 Drainage System	All fixtures <i>shall (195)</i> be provided with an adequate drainage system, each fixture connecting to a main sewer line. The main sewer line which <i>shall (196)</i> run below the floor and above the bottom board to the place of exit in the rear of the axles.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	The sewer line <i>shall</i> (197) exit the home not less than two feet (2') but not more than three feet (3') behind the rear axle.(It is expected that the manufacturer use a standard location among the different type of units to allow easier connectivity) The exit pipe <i>shall</i> (198) protrude at least six inches (6"), but not more than eight inches (8"), from the bottom board, <i>shall</i> (199) have a threaded end, and <i>shall</i> (200) be capped with a removable plastic cap and chain.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The drainage system <i>shall</i> (201) be accessible without removing the wheels and/or axles during the installation and deactivation (un-installation) process.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The drainage system <i>shall</i> (202) meet HUD code	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All water lines <i>shall</i> (203) be installed to a point above the flooring in such a manner that opening of the valves result in the complete drainage of the water lines. The drain valves <i>shall</i> (204) be brass.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All units <i>shall</i> (205) be ready to hook up to municipal sewage or an on-site septic system.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
12.3 Water Heater / Furnace Compartment	The manufactured home manufacturer <i>shall</i> (206) provide interior access to the water heater. The interior access door <i>shall</i> (207) be appropriately sized and located as to allow easy replacement of the water heater.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The water heater compartment <i>shall</i> (208) be labeled as a hot water compartment. The label <i>shall</i> (209) include an admonition that states "No additional items should be stored in the compartment."	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The compartment <i>shall</i> (210) have a light fixture and bulb to allow for maintenance. The light <i>shall</i> (211) be equipped with a light switch and <i>shall</i> (212) not have a pull string.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

	<p>Access <i>shall</i> (213) be provided through a door that is keyed with a single master key. The master key for access to the hot water compartment <i>shall</i> (214) be unique and not match any other key used for interior or exterior locks providing access to the manufactured home unless specifically designated (e.g., fire sprinkler compartment). <i>See requirement for “Water Heater Compartment Standard Key.”</i></p>					
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	<p>The manufacturer <i>shall</i> (215) ensure that there is adequate warm air from the interior of the manufactured home into the water heater compartment so that the water heater compartment is maintained at a temperature high enough that water stored in the water heater or flowing through the compartment piping does not freeze.</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>There <i>shall</i> (216) not be an exterior door that provides access to the water heater compartment.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>If the manufactured home is equipped with a split HVAC system, then the air handler and the furnace portion of the HVAC <i>shall</i> (217) be placed in the water heater / furnace compartment.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
12.4 Water Heater	<p>A 40-gallon electric dual element quick recovery water heater <i>shall</i> (218) be installed. The water heater <i>shall</i> (219) be complete with a pressure relief valve, corrosion resistant drain pan, and a metal tank drain valve.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>The valves and drain pan <i>shall</i> (220) be separately piped four inches (4”) to six inches (6”) below the bottom board of the home and <i>shall</i> (221) be at least five inches (5”) away from the water inlet pipe. The corrosion resistant water drip collection pan, relief valve, and corrosion resistant drain pan <i>shall</i> (222) be separately piped to the exterior.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>Piping <i>shall</i> (223) be installed at the factory.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	Relief valve <i>shall</i> (224) be placed to exterior but pointed down with downward directed outlet to ground.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
12.5 Plumbing Controls and Faucet Assemblies	All faucet assemblies in the home <i>shall</i> (225) include secondary shutoff valves (one for each the hot and cold water supply).The secondary shutoff <i>shall</i> (226) be located in close proximity to the faucet assembly (i.e., under the sink).). A secondary shutoff valve is not required for the tub/shower assembly.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
13.0 Attic						
13.0 Radiant Barrier	The contractor <i>shall</i> (227) install a reflective insulation system in the attic with either a radiant barrier or reflective insulation product as a component. A radiant barrier is made of highly reflective material and may be reinforced with a middle fabric layer making it puncture and tear resistant.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Radiant barrier insulation <i>shall</i> (228) be energy star compliant: ninety-five to ninety-seven percent (95-97%) of the radiant heat will reflect back to its source when installed properly. Radiant reflective paint [Interior Radiation Control Coatings (IRCC)] is not acceptable.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
14.0 Structural System						
14.1 Transportation System and Main Frame	The main frame of the unit <i>shall</i> (229) be a twelve inch (12”) steel I-beam	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The contractor <i>shall</i> (230) provide and install two (2) additional I-beams of the same material and composition as the main frame <i>shall</i> (231) extend a minimum of eighteen inches (18”) on each side of the axle group, with each additional I-beam measuring fourteen feet (14’0”) minimum in length.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The additional I-beams <i>shall</i> (232) be installed in accordance with DAPIA approved designs and centered over the axle area in such a manner that the main frame I-Beam is doubled forward and aft through the axle area.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The frame <i>shall</i> (233) be secured to the floor joist system and the frame alignment <i>shall</i> (234) be maintained by installing appropriate steel fasteners and lag bolts at every floor joist	3 bedroom				
		2 bedroom				
		1 bedroom				

	The contractor <i>shall</i> (235) provide documentation that the manufactured home complies with 24 CFR 3280.903.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.2 Outriggers	The manufacturer <i>shall</i> (236) provide and install industry standard tapered outriggers (minimum twelve gauge), preformed C- or Z-type, and twelve (12) gauge outriggers having a base of nine inches (9") nominal	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Outriggers <i>shall</i> (237) be installed the entire length of the home at forty-eight inch (48") on center (o.c.). The outriggers <i>shall</i> (238) be mounted to the main frame I-Beam by DAPIA approved on both sides. The outriggers <i>shall</i> (239) terminate flush with the perimeter floor joist and be secured at this point with a lag bolt.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Additional outriggers <i>shall</i> (240) be provided and installed at each location where a shackle (spring hanger) is mounted to the main frame I-Beam.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Tolerances <i>shall</i> (241) be in compliance with the DAPIA approved designs and specifications.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.3 Front/Rear Cross-Members	The contractor <i>shall</i> (242) provide and install front and rear cross-members (aprons). Each cross-member <i>shall</i> (243) be the width of the unit and constructed of a minimum twelve inch (12") I-Beam. Each cross-member <i>shall</i> (244) be fastened to the front and rear perimeter floor joists, respectively, with a minimum of six (6) lag bolts evenly spaced from corner to corner along the length of the cross-member.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.4 Cross-Members	The contractor <i>shall</i> (245) provide and install cross-members. The cross-members <i>shall</i> (246) be installed the entire length of the home, located between the two main frame I-Beams, be forty-eight inches (48") on center, and in accordance with the DAPIA approved designs and specifications.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
o n n e	All lag bolts <i>shall</i> (247) be at least five-sixteenths of an inch by three inches	Express unit				
		3 bedroom				

	(5/16" x 3"; acceptable alternative is 9 mm x 76 mm) and be fully threaded. At least one lag bolt <i>shall</i> (248) be used to connect each outrigger to the perimeter joist and at least one lag bolt <i>shall</i> (249) be used to connect the 1" x 1 1/2" x 12 gauge clip that is welded to each main I-beam and connected to each floor joist at sixteen inches (16") on center.	2 bedroom				
		1 bedroom				
		Express unit				
14.6 Coatings	All exposed surfaces of the entire frame <i>shall</i> (250) be completely coated after welding. This coating <i>shall</i> (251) be waterproof. The serial number <i>shall</i> (252) be painted with rust resistant contrasting color paint, 2 inches (2") tall.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
14.7 Floor Joists	The floor joists <i>shall</i> (253) be two inches by eight inches (2" x 8") nominal and run transverse to the length of the unit. Floor joists <i>shall</i> (254) be spaced sixteen inches (16") on center and splicing of the floor joists is not acceptable. A two inches by eight inches (2" x 8") nominal rim member <i>shall</i> (255) be installed to enclose the floor perimeter. The floor joists <i>shall</i> (256) be SPF # 2 or better or equivalent. Note: Alternatives methods used <i>shall</i> be approved by the DAPIA prior submission.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
14.8 Floor Decking	The floor decking <i>shall</i> (257) be composed of 3/4" (23/32") minimum thickness material that meets the requirements set forth in 24 CFR 3280.308; panels with joists spacing index of 24 (long edges of the panel <i>shall</i> (258) be tongue and groove, and with sixteen inches (16") on center floor joists). The decking should be placed perpendicular to the joist length.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	If plywood is used, plywood <i>shall</i> (259) be installed tongue and groove and secured in such a manner that the wood ends terminate on structural members for proper securing	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Floor shall (260) be designed and constructed to resist floor loads to which it may be exposed.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
14.9 Floor and Ceiling	Floor and ceiling cavities <i>shall</i> (261) be insulated with flame retardant insulation and <i>shall</i> (262) have a minimum R rating of nineteen(R-19) in accordance with 24 CFR 3280.506.	3 bedroom				
		2 bedroom				
		1 bedroom				

	Condensation control (vapor barriers) <i>shall</i> (263) be installed in accordance with section 24 CFR 3280.504.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.10 Ceiling Height	The interior height of the ceiling <i>shall</i> (264) be eight feet (8').	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The ceiling <i>shall</i> (265) have a nominal height between seven feet eleven inches (7' 11") and eight feet one inch (8' 1").	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.11 Interior Walls	A minimum one inch by three inch (1" x 3") bottom plate <i>shall</i> (266) be installed at all locations of interior walls	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All interior walls studs <i>shall</i> (267) be framed (studded) with minimum two inch by three inch (2" x 3") nominal lumber spaced on 16" centers.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Interior walls <i>shall</i> (268) be secured to a minimum two inch by three inch (2" x 3") top plate	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All openings for interior doors and alcoves <i>shall</i> (269) be double framed with the same materials as the interior door studs and <i>shall</i> (270) have headers/framing member from the top of the door to the ceiling.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.12 Roof Trusses	Roof trusses <i>shall</i> (271) be installed the entire length of the home with a maximum of sixteen inch (16") on centers (o.c.) and each <i>shall</i> (272) align with an exterior wall stud.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The exterior walls <i>shall</i> (273) be connected to the roof trusses with a hurricane strap (also known as hurricane clip).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

	The roof trusses <i>shall</i> (274) not be cut for the passage of any electrical, plumbing, and/or mechanical system.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Exterior roof coverings <i>shall</i> (275) be secured to minimum three-eighths inch (3/8") structural rating sheathing. <i>See Part 3280.305 (HUD Standard, Table of Design Wind Pressures, Footnote 7).</i>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
14.13 Exterior Walls	The exterior wall framing (studs) <i>shall</i> (276) be two inches by six inches (2" x 6") nominal installed at a maximum spacing no greater than sixteen inches (16") o.c., and secured to the top and bottom plate	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The strapping of the wall studs to roof trusses and perimeter joists <i>shall</i> (277) be twenty-six (26) gauge minimum steel straps or brackets at sixteen inches (16") o.c to conform to the requirements of Wind Zone III conforming to 24 CFR 3280.305 (e)(2).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The exterior walls <i>shall</i> (278) be connected to the roof trusses with a hurricane strap (also known as hurricane clip).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The exterior walls <i>shall</i> (279) be insulated with flame retardant insulation having a minimum R rating of nineteen (19).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Condensation control (vapor barriers) <i>shall</i> (280) be installed in accordance with <i>Part 3280 (HUD Standard) 24 CFR 3280.504.</i>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The insulation <i>shall</i> (281) be "batt" wall insulation for this application.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Anchoring strap <i>shall</i> (282) be secured to each full length wall stud on each side of all double-framed door and window openings. (Straps are not required on jack studs.)	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

		Express unit			
	All exterior openings such as windows, doors, drain pipes, etc., <i>shall</i> (283) be caulked to prevent air and moisture penetration.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	All exterior penetrations (e.g. doors, windows, vents, exterior lighting, and power outlets) <i>shall</i> (284) be equipped with ice and water shields.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	Ice and water shield is a peel and stick product that adheres directly to the building's surface and forms a water-proof barrier. It is also commonly applied in the valleys of a house as well as around any roof protrusions including; pipe boots, and roof vents. All areas that are the weakest or most prone to leaking <i>shall</i> (285) be coated with ice and water shield before installing shingles, or any other roofing products or siding.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The manufacturer <i>shall</i> (286) use Ice and water shield around exterior penetrations such as doors, windows, vents, exterior lighting, and power outlets to provide extra protection against water intrusion.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	The unit <i>shall</i> (287) have a minimum 3/8" (11/32") thick structural rated sheathing on all exterior walls. The exterior sheathing is in addition to the building wrap.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	J-channel installed <i>shall</i> (288) not be punctured with weep holes over windows and doors. J-channel joints <i>shall</i> (289) not be installed over doors and windows.	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
14.14 House Wrap	House wraps <i>shall</i> (290) be permeable weather barriers which allow air and water to escape from, but not enter, the unit. The house wrap <i>shall</i> (291) be installed in accordance with the house wrap manufacturer's instructions. The manufactured home manufacturer <i>shall</i> (292) provide the house wrap installation instructions to FEMA upon request. .	3 bedroom			
		2 bedroom			
		1 bedroom			
		Express unit			
	In addition to house wrap, all exterior penetrations (e.g. doors, windows, vents, lighting, and power outlets) <i>shall</i> (293) be equipped with ice and water shields.	3 bedroom			
		2 bedroom			

14.15 HVAC System Air Supply Ductwork(If Applicable)	All warm air supply ductwork <i>shall (294)</i> be constructed of metal or insulated fiberglass materials and be complete with joint stays and sealed ends.	1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Closure systems consisting of tapes or mastics, or polymeric mechanical fasteners <i>shall (295)</i> be evaluated and meet the requirements of UL 181A and/or UL 181B	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All seams <i>shall (296)</i> be sealed with UL 181A and/or 181B -listed duct mastic tape, which will be verified before acceptance, with mechanical fastening to ensure airtight construction with a maximum three percent (3%) duct loss. No construction debris or sawdust may be left in the duct system.	Express unit				
3 bedroom						
2 bedroom						
1 bedroom						
The manufacturer <i>shall (297)</i> ensure that there are air no leaks	Express unit					
	3 bedroom					
	2 bedroom					
	1 bedroom					
14.16 Anchor Straps	Each home <i>shall (298)</i> be equipped with vertical and diagonal straps to meet the requirements of 24 CFR 3280.306. The anchors <i>shall (299)</i> be designed to meet the requirements for an installation from twenty-five inches to forty-eight inches (25” to 48”) in height and spaced in accordance with the DAPIA approved installation instructions. Anchor straps <i>shall (300)</i> be provided with the manufactured home. All vertical and diagonal tie straps <i>shall (301)</i> be coated with zinc or other approved galvanic protection that provides at least .60 ounces per square foot of surface coating on all exposed sides. The anchor straps <i>shall (302)</i> not be spliced.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
15.0 Transport and Transportation Systems						
15.1 Transportation System General	The transportation system components <i>shall (303)</i> be installed with locking nuts or lock washers for every bolt.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
15.2 Axles	All units <i>shall (304)</i> be equipped new axle assemblies.	3 bedroom				
		2 bedroom				
		1 bedroom				

	<p>The DAPIA <i>shall</i> (305) be made aware that FEMA may store the manufactured homes for a period of up to four (4) years and that FEMA will be transporting the manufactured homes for distances of up to six-thousand miles (6,000 mi). The contractor <i>shall</i> (306) require the DAPIA to document the choice of the axles and indicate that the axles meet the requirements</p> <p>The contractor <i>shall</i> (307) specify the number of axles for the Manufactured Homes.</p> <p>The weight supported by each axle <i>shall</i> (308) not exceed 80% of the total rated capabilities of the axle.</p> <p>The number of axles <i>shall</i> (309) meet the requirements for the States where the Manufactured Home could be deployed.</p> <p>Axles <i>shall</i> (310) be rated at the appropriate weight at sixty five miles per hour (65 mph).</p> <p>For all manufactured home types the contractor <i>shall</i> (311) ensure and provide documentation that the weight of the manufactured home does not exceed the allowable weight for the number of axles provided. The weight of the manufactured home <i>shall</i> (312) be calculated to include all items that are shipped with the manufactured home including all furniture and fixtures as well as any options exercised</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
e 1 B	<p>Axles <i>shall</i> (313) include grease fittings to facilitate maintenance of the axle hubs and bearings. The grease fittings <i>shall</i> (314) be secured from environmental conditions when not being accessed during maintenance. The grease fittings (also known as grease nipples, Zerk fittings, Alemite fittings, Bearing Buddies, and other names) are acceptable as long as their function is similar to fittings that are permanently installed by a threaded connection, leaving a nipple connection that the grease gun attaches to</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Wheel bearings <i>shall</i> (315) meet the minimum requirements of SAE. Wheel	3 bedroom				

	bearing capacity <i>shall (316)</i> exceed maximum axle load capacity and the tire load capacity	2 bedroom				
		1 bedroom				
		Express unit				
	The minimum required operating life <i>shall (317)</i> be three-thousand hours (3,000 hrs)	3 bedroom				
		2 bedroom				
		1 bedroom				
15.5 Brakes	All axles <i>shall (318)</i> be equipped with electrically operated brakes 49 CFR Section 393.42).	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The brakes <i>shall (319)</i> meet or exceed the brake performance requirements of FMCSA 49 CFR Section 393.52, in combination with the towing vehicle	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	For the Express 1-Bedroom units, the brake system <i>shall (320)</i> have the capability of meeting the performance requirements of FMCSA 49 CFR 393.43(d) when equipped with a battery. An appropriate battery box and wiring <i>shall (321)</i> be built into the unit	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
15.6 Springs	Threshold: Springs <i>shall (322)</i> be of the multi-leaf type and appropriately rated with an over the axle mounting assembly (shackles, bolts, bushings, etc.). Shackles <i>shall (323)</i> be secured to the main frame I-beams by continuous weld. Optional: The manufacturer has the option to utilize a torsion bar suspension. This option could require an ACL.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
15.7 Tires and Rims	All tires and rims <i>shall (324)</i> be new and free of defects. The manufacturer <i>shall (325)</i> specify the tires and rims to meet or exceed the minimum US DOT requirements of FMVSS 571.110 for trailers of 10,000 lbs or less or 571.120 for trailers more than 10,000 lbs.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	Rim clamps, bolts, nuts or other related tire-mounting hardware <i>shall (326)</i> be new.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
15.8 Draw bar	The drawbar <i>shall (327)</i> be three feet to four feet (3'-4') and be welded not bolted.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

	The drawbar ("A" frame) <i>shall</i> (328) be installed in such a manner that it is centered for proper towing and is secured by continuous weld to two (2) points on the front cross-member and two (2) points on the main frame I-beam. A cross-member of the same material as the drawbar <i>shall</i> (329) be secured to the inside of the drawbar by continuous weld. The cross-member <i>shall</i> (330) be located midway between the coupler hitch and the buck plates. An additional cross-member <i>shall</i> (331) be installed and secured by continuous weld inside the drawbar at the point where the drawbar legs are welded to the main frame I-beam	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	All welds on the drawbar <i>shall</i> (332) be primed and painted with rust preventative paint to ensure that the welds are protected from the elements.	Express unit				
		3 bedroom				
2 bedroom						
1 bedroom						
15.9 Screw Jack	The screw jack <i>shall</i> (333) be the industry standard bolt in type and capable of supporting 120% the calculated weight that is going to be transferred to the screw jack. Also, it <i>shall</i> (334) have galvanized protection coating with at least .30 ounces/sq-ft.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
15.10 Transportation Lighting	1-Bedroom Express units <i>shall</i> (335) be equipped with permanent lighting per USDOT NHTSA FMVSS 571.108.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	2 and 3-Bedroom units <i>shall</i> (336) be transported with lighting compliant with FMCSA 49 CFR Section 393.17.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
16.0 Exterior Coverings						
16.1 Exterior Siding Covering	Unit siding <i>shall</i> (337) be the manufacturer’s standard Vinyl siding or similar (color: light grey) in accordance with 24 CFR 3280.307. Siding and corners <i>shall</i> (338) be the same color.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Soffits, trim and J-block <i>shall</i> (339) either be the same color, or white. J-channel <i>shall</i> (340) not be punctured with weep holes or joints over windows and doors.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The exterior siding <i>shall</i> (341) be installed in accordance to manufacturer instructions	3 bedroom				
		2 bedroom				

		1 bedroom				
		Express unit				
16.2 Window Shutters	The manufactured home <i>shall (342)</i> not have window shutters	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
16.3 Roof Coverings	All roof assemblies <i>shall (343)</i> include non-rust drip edge. Drip edges <i>shall (344)</i> not have joints over the doors or windows	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
16.4 Access/Egress water protection 1.1	The roof <i>shall (345)</i> be installed within the manufacturer's standard and constructed with adequate ventilation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All roof penetrations (e.g. vents) <i>shall (346)</i> be equipped with ice and water shields.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	An ice and water shield, consisting of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet, <i>shall (347)</i> be provided and extend from the lowest edges of all roof surfaces to at least twenty-four inches (24") beyond the exterior wall.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The roof <i>shall (348)</i> have a shingle roof covering to resist the loads indicated in the Table of Design Wind Pressures in 24 CFR 3280.305.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The Roof <i>shall (349)</i> have a Light or white colored composition shingle with a minimum solar reflectance equal to or greater than Energy Star specifications for roof products.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All roof penetrations <i>shall (350)</i> be capped with a galvanized metal cap. The galvanized metal caps <i>shall (351)</i> be primed and painted, so as to prevent rust. The color should match the exterior roof color. Rubber grommets <i>shall (352)</i> not be used.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Roof <i>shall (353)</i> have shape, materials and details that do not allow the entry of	3 bedroom				

	water into the unit.	2 bedroom				
		1 bedroom				
		Express unit				
	The manufacturer <i>shall (354)</i> provide a mean to minimize water flowing from the roof of the manufactured home into the access/egress doorway area. If it is a non-permanent solution and it <i>shall (355)</i> be properly packed and secured so it does not damage the Manufactured Home during transportation. The Solution <i>shall (356)</i> be selected so that tools used for the installation <i>shall (357)</i> be Standard tools typically used to install a manufactured home	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
16.5 Bottom Board	The Bottom board of the home <i>shall (358)</i> be secured under the entire home, moisture resistant, so as to prevent rodents from entering the unit. The underside of the home <i>shall (359)</i> be enclosed and meet 24 CFR 3280.305(g)(6).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Plastic materials <i>shall (360)</i> be a minimum of twenty (20) mil thickness. Allowance to install cross tie anchoring buckles <i>shall (361)</i> be made Allowance to install cross tie anchoring buckles <i>shall (362)</i> be made Multiple layers of acceptable material [24 CFR 3280.305(g)(6)] could be used to meet the twenty (20) mil thickness requirement.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
16.5 Bottom Board Tire Blowout / Road Hazard Damage Mitigation	The contractor <i>shall (363)</i> install wooden board or other material that <i>shall (364)</i> deflect or prevent material from tire blowouts from damaging the “Bottom Board” or other items above the tires. The material <i>shall (365)</i> be of a type that <i>shall (366)</i> endure multiple manufactured home transportation, storage, and installation/deactivation cycles without rotting or rusting.	3 bedroom				
		2 bedroom				
		1 bedroom				
	Express unit					
	17.0 Interior Covering					
17.1 Paint	The manufactured home <i>shall (367)</i> have an off-white interior color with semi-gloss finish.	3 bedroom				
		2 bedroom				
		1 bedroom				
	Walls <i>shall (368)</i> be primed prior to painting unless the surface is painted using a combination of primer coat and a minimum of two coats of /paint.					

	Walls, molding, and trim paint <i>shall</i> (369) be antimicrobial low volatile organic compound(VOC)	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
17.2 Walls	<i>Shall</i> (370) be constructed using moisture / mold resistant materials.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All panels <i>shall</i> (371) begin and terminate on wall studs. All panel joints <i>shall</i> (372) be made flush as possible and covered with adequate joint compounds or molding strips.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All panel joints <i>shall</i> (372) be made flush as possible and covered with adequate joint compounds or molding strips.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All panels <i>shall</i> (373) be secured to each wall stud it comes in contact with.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All outside corners <i>shall</i> (374) be reinforced with corner guards, either metal(non-corrosive) that is free of burrs or sharp points or edges and are covered by adequate joint compound, or wood molding so that the corner is protected. Batten strips are not acceptable for dry wall / sheet rock joints	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All joints, except when using molding strips, <i>shall</i> (375) have a Level 5 finish, as specified in Gypsum Association, GA-214 "Recommended Levels of Gypsum Board Finish", prior to priming	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
17.3 Molding and Trim	All trim molding used in the home <i>shall</i> (376) be color matched or color coordinated to the interior paneling. All seals, joints, door and window frames, corners (in plain view or not), etc., <i>shall</i> (377) be finished with appropriate matching moldings.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

	All exposed panel edges, such as access panels, <i>shall</i> (378) be covered with permanently attached non-plastic edging.					
	Prior to delivery, the manufacturer <i>shall</i> (379) ensure that all joints (between trim and walls, molding and walls, molding and floors, etc.) <i>shall</i> (380) be sealed and caulked with appropriate caulking material to ensure that there is a tight seal.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
17.5 Ceiling Panels	The manufacturer <i>shall</i> (381) construct the manufactured home ceiling using industry standard methods.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	17.6 Floor Coverings	All interior floor covering <i>shall</i> (382) be durable and low maintenance, be continuous roll without seams, resilient, and non-skid floor covering.	Express unit			
3 bedroom						
2 bedroom						
1 bedroom						
Carpet is not acceptable anywhere in the home with the following exception. A mat approximately thirty inches by fifteen inches (30” x 15”) <i>shall</i> (383) be placed at each entrance as a door mat.		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
If heat duct are installed in the floor, openings <i>shall</i> (384) be covered with a four inch by ten inch (4" x 10”) minimum, metal, adjustable louvered covering (register).		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
18.0 Heating / Air Conditioning/ Ventilation						
18.1 HVAC Systems	FEMA HVAC systems <i>shall</i> (385) be one of the following: Central Air Conditioner/Split System The installation of a central air condition unit requires duct work and pipe work. Packaged Unit Unlike the split system, the packaged unit has all the components of the air conditioning system all in one place. The unit itself requires duct work, power line and drain piping.	3 bedroom				
		2 bedroom				
		1 bedroom				

	Mini Split / Ductless Split The split systems have an exterior condenser and an indoor evaporator unit that houses the cooling coil, a fan, controls to which you can add indoor blowers. Some models are designed to have more than one evaporators connected to the condenser unit. Each evaporator blower is mounted high on a wall inside the unit/room you want to cool.					
	HVAC systems <i>shall (386)</i> not transmit mechanical energy, potential and kinetic energy(i.e. Vibration), to the chassis of the MH that would lead to generate sounds and/or vibrations that will affect the comfort of the occupants The manufacturer can utilize different methods to absorb and/or dissipate the effects of the mechanical energy	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
18.2 HVAC Geographic Area	Manufactured Homes HVAC systems <i>shall (387)</i> be selected/designed/installed according to the thermal zone that the unit is going to be built or <i>shall (388)</i> be able to accommodate all zones in the US.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The Manufacturer <i>shall (389)</i> meet HUD code.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The unit <i>shall (390)</i> obtain a 3280.510 Heat loss certificate and/or a 3280.511 Comfort cooling certificate and information as required by HUD code	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
18.3 Furnace	The unit <i>shall (391)</i> be equipped with at least a ninety-five percent (95%) efficient electric furnace (central heating system) capable of maintaining an average of seventy degrees Fahrenheit (70°F) temperature in the manufactured home. The furnace <i>shall (392)</i> be able to maintain the temperature based on the coldest average temperature of the operating area of the manufactured home.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The electric furnace (central heating system) <i>shall (393)</i> operate according to 24 CFR 3280.510. The furnace <i>shall (394)</i> also be built or equipped for the	3 bedroom				
		2 bedroom				

	installation of a split type air conditioner and have enclosed space in water heater/furnace compartment ,for an A-coil evaporator unit, and with a 4-wire thermostat connects connections completely wired and installed.	1 bedroom				
		Express unit				
	Each furnace <i>shall</i> (395) have instructions attached to the furnace. The furnace <i>shall</i> (396) be complete with a factory-supplied base suitable for a forced air duct distribution system.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	If the HVAC system has a separate furnace / air conditioning condenser, the furnace / air handling unit <i>shall</i> (397) be enclosed in the water heater / furnace compartment.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	3 bedroom: The output <i>shall</i> (398) not be less than forty-thousand (40,000) BTU and in accordance with <i>Subpart F of 24 CFR 3280 and Subpart H of 24 CFR 3280</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	2 bedroom: The contractor <i>shall</i> (399) specify the output for the 2-Bedroom units. The HVAC <i>shall</i> (400) be designed and built in accordance with <i>Subpart F of 24 CFR 3280 and Subpart H of 24 CFR 3280</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	1 bedroom: The contractor <i>shall</i> (401) specify the output for the 1-Bedroom units. The HVAC <i>shall</i> (402) be designed and built in accordance with <i>Subpart F of 24 CFR 3280 and Subpart H of 24 CFR 3280</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Express unit: The contractor <i>shall</i> (403) specify the output for the express units. The HVAC <i>shall</i> (404) be designed and built in accordance with <i>Subpart F of 24 CFR 3280 and Subpart H of 24 CFR 3280</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
18.4 Air Conditioner	The manufactured home <i>shall</i> (405) be equipped with a specifically engineered Heating, Ventilation and Air Conditioning (HVAC) system based on the size and intended use of the manufactured home, in accordance with <i>ACCA Manual J requirements</i> , that is compatible with the furnace and unit size. The contractor <i>shall</i> (406) provide FEMA with documentation, engineering calculations and	3 bedroom				
		2 bedroom				
		1 bedroom				

	specifications upon request.					
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	The Air Conditioner <i>shall</i> (407) be able to maintain an average of seventy-five degrees Fahrenheit (75°F) temperature in the manufactured home and obtain HUD required certificate (§ 3280.511 Comfort cooling certificate)	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Supply Ducts: If applicable, Supply ducts <i>shall</i> (408) be located in the	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		Express unit				
	Thermostat: The thermostat <i>shall</i> (409) be a digital readout with automatic settings from heat / cool.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		Express unit				
18.5 HVAC Damper	The HVAC system <i>shall</i> (410) be equipped with a damper that <i>shall</i> (411) allow for the adjustment of the mixture of fresh air entering the manufactured home through the HVAC system. The damper <i>shall</i> (412) be designed in such a way that a technician will be needed to adjust the damper setting. The damper <i>shall</i> (413) be set to meet the 24 CFR 3280.103(b) requirements for whole This requirement does not apply for Mini Split Systems; however 24 CFR 3280.103(b) requirements <i>shall</i> be met.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		Express unit				
18.6 Dehumidifier(If required)	If a Dehumidifier is required to meet specific thermal Zone requirements, the Dehumidifier <i>shall</i> (414) be located in the Water Heater Closet and <i>shall</i> (415) be connected to the sanitary sewer system.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		Express unit				
18.7 HVAC Installation	The HVAC system <i>shall</i> (416) be completely installed at the production facility. This includes duct work, installation manual, and any other materials needed for the installation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The HVAC <i>shall</i> (417) be provided with the manufactured home.	3 bedroom				
		2 bedroom				

		1 bedroom				
		Express unit				
The HVAC <i>shall</i> (418) be the type that is installed on the short side of the home.		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
The HVAC unit <i>shall</i> (419) not require additional installation when the manufactured home is installed.		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
<p>If the manufacturer provides a split /mini split HVAC system with the air condition condenser mounted on the draw bar or extension of the frame at the rear of the home. The compressor <i>shall</i> (420) be mounted in such a way as to dampen the vibrations and any sound that accompany condenser operation cycles.</p> <p>The mounted compressor <i>shall</i> (421) be attached in such a way that the there are no sharp edges or protrusions and the condenser <i>shall</i> (422) not be damaged in any way during transportation or use. If the compressor is mounted on the draw bar side of the manufactured home the compressor <i>shall</i> (423) be protected from damage when transported/moved.</p>		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
The HVAC unit condenser <i>shall</i> (424) not produce any unwanted sound that disturbs the sleep and comfort of the occupants.		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
<p>If FEMA does not exercise the option to shrink wrap the entire manufactured home the contractor <i>shall</i> (425) install a weatherproof covering on the external mounted portion of the HVAC that <i>shall</i> (426) prevent water penetration during transportation and storage of the manufactured home. The HVAC cover <i>shall</i> (427) be designed for one time use, however, the manufactured home may be in storage for up to five (5) years and the cover <i>shall</i> (428) protect the HVAC for the entire time that it is in storage and being transported to the initial installation point. The cover <i>shall</i> (429) be installed in such a way as to not cause damage to the HVAC or the manufactured home's siding during storage or removal of the cover. This <i>shall</i> (430) include leaving residue after tape is removed.</p>		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

18.8 Ventilation	Each bathroom exhaust fan <i>shall (431)</i> be adequately rated for the size (square footage) of the bathroom, however, at a minimum <i>shall (432)</i> exhaust no less than seventy-five (75) CFM.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Bathroom exhaust fan <i>shall (433)</i> be directly vented to the outside. The ventilation fan in the bathroom <i>shall (434)</i> be equipped with a timer that allows the fan to operate for a minimum of sixty (60) minutes prior to turning the fan off.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Kitchen exhaust fan <i>shall (435)</i> exhaust a minimum of one-hundred (100) CFM, directly vented to the outside.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
19.0 Fixtures and Receptacles						
19.1 Exterior Fixtures	The contractor <i>shall (436)</i> equip the MHU with a “UL” approved weatherproof exterior lighting fixture and associated wiring <i>shall (437)</i> be provided at each exterior entrance/exit door. Fixtures <i>shall (438)</i> not be installed where rotation of bulbs would block exterior door exits. An interior wall switch <i>shall (439)</i> be installed near the exterior entrance/exit door the light serves.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The fixture <i>shall (440)</i> be a metal, 150-degree motion-sensing twin flood security light. The color <i>shall (441)</i> be light grey or white. The motion sensing light <i>shall (442)</i> be installed so that it has a manual override feature. Fixture <i>shall (443)</i> be Energy Star.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Appropriate flood light bulbs <i>shall (444)</i> be provided in a secure location in the kitchen.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All exterior penetrations (e.g. lighting and power outlets) <i>shall (445)</i> be properly sealed and caulked with proper material and equipped with ice and water shields.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
19.2	Electrical receptacles <i>shall (446)</i> be installed at convenient locations throughout	3 bedroom				

	the unit. All electrical outlets <i>shall (447)</i> be eighteen inches (18”) about the finished floor. All Switches and thermostat <i>shall (448)</i> set forty-eighth inches (48”) above the finished floor.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	Electrical receptacles <i>shall (449)</i> be installed in accordance with industry standard except that self-contained devices are not permitted.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	Receptacles near wet areas <i>shall (450)</i> be protected with a ground fault circuit Interrupter (GFCI) The manufacturer <i>shall (451)</i> install a minimum of four (4) GFCI protected receptacles in the kitchen above the counter.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	The receptacle for the range <i>shall (452)</i> be flush mounted in the wall to the rear appliance.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	The receptacle for the refrigerator <i>shall (453)</i> be located so it can be unplugged without moving the refrigerator.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	The unit <i>shall (454)</i> equipped with a side by side electric washer and dryer hookup	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	Each bedroom <i>shall (455)</i> have a receptacle on each wall	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
19.3 Exterior Receptacles(Heat Tape)	Each home <i>shall (456)</i> be provided with a single outlet heat tape receptacle with a weatherproof case, located under the unit and within two feet (2’) of the water pipe inlet.	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
	The exterior receptacle for the heat tape <i>shall (457)</i> not be a ground fault circuit interrupter (GFCI). [24 CFR 3280.604(b)(4)(ii)]	2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				

Weather proof Outdoor Duplex s Recepta	<p><u>For FEMA “Northern Units” and “CONUS” only:</u></p> <p>In addition to the outlet as described above, all Northern and “CONUS” units <i>shall (458)</i> have one (1) weatherproof outdoor duplex receptacle that <i>shall (459)</i> also be located under the unit and within two feet (2’) of the water pipe inlet. With the single receptacle for heat tape and the additional duplex receptacle, no less than three (3) duplex outlets <i>shall (460)</i> be available under the unit and within two feet (2’) of the water pipe inlet. These additional receptacles <i>shall (461)</i> be installed without ground fault circuit interrupter [24 CFR 3280.604(b) (4) (ii)] so that they can be used for additional water connection heat tape.</p> <p>The additional duplex outlet <i>shall (462)</i> be placed on the underside of the manufactured home and not be placed on the side of the home, where it would be accessible and be used when the manufactured home is skirted.</p> <p>This FEMA requirement may need the home manufacturer to request an Alternative Construction letter from HUD.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
	One (1) weatherproof outdoor duplex receptacle <i>shall (463)</i> be flush mounted on the exterior wall of the home, approximately five feet (5’) forward of the water inlet and approximately six inches (6”) up from the floor level.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
20.0 Safety Equipment						
20.1 Smoke Alarms	Smoke alarms <i>shall (464)</i> be installed as specified in 24 CFR§ 3280.208 Smoke alarm requirements	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Each unit <i>shall (465)</i> have interconnected smoke alarms that utilize the electrical system of the home as the primary power source (with battery back-up included). Smoke alarms <i>shall (466)</i> follow NFPA recommendations without affecting compliance with the 24 CFR§ 3280.208 Smoke alarm requirements and/or the Rugged Base Requirements.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Smoke alarms <i>shall (467)</i> be equipped with push-button testing and temporary silencing devices. Provide a smoke detector in each bedroom and in the living room / dining / kitchen area. Each MHU <i>shall (468)</i> be equipped with a strobe component as visual signal of smoke or fire.	3 bedroom				
		2 bedroom				
		1 bedroom				

		Express unit				
20.2 Fire Extinguisher	Each manufactured home <i>shall</i> (469) be equipped with a five pound (5 lb) A-B-C type fire extinguisher and a mounting bracket. The mounting bracket <i>shall</i> (470) be secured to a wall stud in the kitchen / living area.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The location of the extinguisher <i>shall</i> (471) follow NFPA recommendations	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
20.3 NOAA weather radio	Each manufactured home <i>shall</i> (472) be equipped with NOAA weather radio in each bedroom and <i>shall</i> (473) be equipped with a strobe component. NOAA weather radios <i>shall</i> (474) be approved by <i>Federal Communications Commission (FCC) and National Oceanic and Atmospheric Administration (NOAA)</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All weather radios <i>shall</i> (475) work with electrical power and battery backup	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All weather radios <i>shall</i> (476) be UFAS compliant.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
21.0 Access System(Doors)						
21.1 Exterior Doors	Each exterior door <i>shall</i> (477) be an industry standard thirty-six by seventy-six (36” x 76”) minimum insulated fiberglass or steel door with a minimum R 3.5 rated insulation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Each door <i>shall</i> (478) be pre-hung and the bottom of the door’s threshold <i>shall</i> (479) be even with the adjacent floor and providing a weather-proof seal	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Each entrance door <i>shall</i> (480) have passage locks and key operated dead bolt locks installed. All key operated dead bolt locks <i>shall</i> (481) use a dedicated key that operates the front and rear Exterior Doors. All locks <i>shall</i> (482) be master keyed.	3 bedroom				
		2 bedroom				
		1 bedroom				

	<p>When facing the unit from the drawbar the front door <i>shall</i> (483) be on the left side and the rear door <i>shall</i> (484) be on the right side near the back. The doors <i>shall</i> (485) not be on the same side.</p> <p>The doors <i>shall</i> (486) be mounted in such a manner that the hinged side is toward the front of the unit (toward the tongue). When fully opened (the maximum extent of the door swing), the door <i>shall</i> (487) not block or come in contact with any window</p> <p>The door <i>shall</i> (488) have lever handles.</p> <p>The door on the left side of the manufactured home <i>shall</i> (489) be designated as the front door. The front door <i>shall</i> (490) swing outward from the manufactured home. The door on the right side of the manufactured home <i>shall</i> (491) be designated as the rear door. The rear door <i>shall</i> (492) swing out-ward from the manufactured home</p> <p>493 and 494 <i>are reserved for future use</i></p> <p>The manufactured home <i>shall</i> (495) not have any screen doors.</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
	<p>Each exterior door <i>shall</i> (496) have two (2) peephole / door viewers. The upper peephole <i>shall</i> (497) be located in the horizontal center of the door, and be placed five feet three inches (5'3", or 63") with a tolerance of (± .5 inch) from the finished floor. The lower peephole <i>shall</i> (498) be located in the horizontal center of the door, and be placed three feet seven inches (3'7", or 43") with a tolerance of (± .5 inch) from the finished floor.</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
21.3 Interi or Doors	<p>All interior passage doors <i>shall</i> (499) be a minimum of thirty-two inches (32") clear width when the door is open in a ninety degree (90°) position. The threshold of the doorway should be even with the adjacent floor.</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				

	Express unit					
	No interior doors <i>shall</i> (500) be short (under) cut (reduced beyond the frame) for any reason except to allow for the door to open and close, to include facilitating air circulation.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Interior doors <i>shall</i> (501) have a floor to door clearance of between a half-inch and a quarter-inch ($\frac{1}{2}$ " - $\frac{3}{4}$ ").	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Air circulation <i>shall</i> (502) be accomplished by providing vents either in the door or through the walls.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	All interior doors <i>shall</i> (503) have lever handles	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Door Stops <i>shall</i> (504) be ins doors to prevent doors from opening too far and damaging nearby walls.	3 bedroom				
		2 bedroom				
1 bedroom						
Express unit						
22.0 Windows						
22.1 Windows and Egress Windows	The minimum window size <i>shall</i> (505) be approximately thirty inches by fifty-four inches (30" x 54") with a maximum U factor 0.36. The windows <i>shall</i> (506) be vinyl, low E glass, and double paned. All windows <i>shall</i> (507) have window screens.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	An exception to the minimum window size is that a thirty inch by twenty-seven inch (30" x 27") window may be used over the kitchen sink.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Windows used as egress windows <i>shall</i> (508) be listed and labeled for use as an egress window with operating instructions affixed to each window	3 bedroom				
		2 bedroom				
	Screens <i>shall</i> (509) be held in place during transit with a removable, reusable, non-corrosive, shipping clip(s). Tape or other temporary securing methods <i>shall</i>	3 bedroom				
		2 bedroom				

	(510) not be utilized to secure screens.	1 bedroom				
		Express unit				
	At least one exterior door <i>shall</i> (511) have a clear opening width of no less than 32 inches	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
22.2 Window Blinds	All windows <i>shall</i> (512) have mini-blinds installed. These mini-blinds <i>shall</i> (513) be designed to meet required industry safety standards and <i>Consumer Product Safety Commission recommendations</i> .	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
22.3 Transponder location	<p>The contractor <i>shall</i> (514) provide a location (transponder sled) to mount a transponder which dimensions are, L: 7.25in x W: 3.25in x H: 1in (184mm x 83mm x 25 mm) and weighs 13 ounces (369 g) (without mounting bracket) or 7.61 x 3.52 x 1.06in (192.42mm x 89.82mm x 26.9mm) with a mounting bracket. The transponder mounting (transponder sled) location <i>shall</i> (515) not impact the functionality and performance of the transponder, damage the MH and/or the transponder under any circumstance.</p> <p>The transponder location <i>shall</i> (516) be accessible, easy to reach and <i>shall</i> (517) allow removing the transponder without any special tool/property tool (a tool designed or reserved for a particular purpose) without damaging the MH, the surface mounted, and/or the transponder.</p> <p>The transponder <i>shall</i> (518) be located as highest as possible with the top position of the transponder pointing to the sky (up position). There <i>shall</i> (519) not be any object obstructing the signal that is emitted and/or received from the satellites.</p> <p>.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.0 UFAS Requirements						
General	All units designated as “UFAS” or “Accessible” <i>shall</i> (520) be fully compliant with applicable UFAS regulations and this document. UFAS “reminders” included throughout these requirements are used to highlight certain standards, but are not all-inclusive, and the contractor <i>shall</i> (521) be responsible for ensuring compliance for applicable UFAS regulations. FEMA has provided specific areas where past units designs have been lacking; however contractors are responsible for UFAS products being fully compliant with applicable PARTS	3 bedroom				
		2 bedroom				
		1 bedroom				

	of UFAS regulations.					
		Express unit				
23.1 Accessible Route	An Accessible route as specified in UFAS 4.3 <i>shall</i> (522) be provided within the unit and <i>shall</i> (523) connect an accessible entrance with all accessible rooms, spaces, and accessible elements of the unit.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.2 Additional Requirements for UFAS Unit: Living Room						
Telephone and Cable television	Cable television and telephone jacks <i>shall</i> (524) be in compliance with UFAS 4.27 for controls and operating mechanisms. The telephone jacks <i>shall</i> (525) have unobstructed access and be located on the accessible route.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.2.2 Living Room Furniture	The living room <i>shall</i> (526) contain compliant turning space in accordance with UFAS 4.2.3 and 4.3 when the furniture is set up and positioned for manufactured home occupancy.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3 Additional requirements for UFAS Unit : Kitchen and Dining						
23.3.1 Dining Furniture	The dinette table <i>shall</i> (527) be movable on wheels or casters. The table in the UFAS manufactured home may be used as the UFAS accessible counter space in the kitchen and <i>shall</i> (528) comply with UFAS 4.32.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.2 Cabinetry	Cabinets <i>shall</i> (529) comply with UFAS 4.1, 4.34, and UFAS 4.25. All cabinet doors and drawers <i>shall</i> (530) be compliant with 4.27.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.3 Kitchen Counter Tops	Countertops <i>shall</i> (531) comply with UFAS 4.32 and UFAS 4.34.6. Switches and electrical receptacles or other controls on walls over kitchen counters <i>shall</i> (532) be within the reach ranges specified in UFAS 4.2.6 for an obstructed reach.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.4 Kitchen Sink	The kitchen sink <i>shall</i> (533) comply with UFAS 4.24.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

23.3.4 Appliances	Each kitchen appliance <i>shall</i> (534) have a clear floor space for a forward or parallel approach complying with UFAS 4.34.6.2. Appliance controls <i>shall</i> (535) be in compliance with UFAS 4.34.6.3 and UFAS 4.27	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.6 Range/ Oven	Locate controls for range burners and oven to avoid reaching across burners. The range/oven <i>shall</i> (536) be in compliance with UFAS 4.34.6.6 and UFAS 4.34.6.3	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.7 Power Vented Hood	Power vent <i>shall</i> (537) have a switch to operate vent in compliance with UFAS 4.27.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.8 Refrigerator	The refrigerator <i>shall</i> (538) be in compliance with UFAS 4.34.6.8.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.9 Microwave Oven	Each unit <i>shall</i> (539) have a minimum 1.2 c.f. microwave with child lock unless this requirement is met through the use of a combination microwave / hood / fan / light and be UFAS compliant.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.10 Washer and Dryer Hookup	A clear floor space in compliance with 4.34.6.2 <i>shall</i> (540) be provided at the washer/dryer location. Where a washer and dryer are provided as part of the unit they <i>shall</i> (541) comply with UFAS 4.34.7. and UFAS 4.27.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.11 Turning Space	The kitchen/dining room <i>shall</i> (542) contain a turning space complying with UFAS 4.2.3.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.3.12 Telephone and Cable Television Outlets	Cable television and telephone jacks <i>shall</i> (543) be in compliance with UFAS 4.27 for controls and operating mechanisms. The telephone jacks <i>shall</i> (544) have unobstructed access and be located on the accessible route. The cable outlet <i>shall</i> (545) have unobstructed access and be located on the accessible route.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.4 Additional requirements for UFAS Unit : Bedrooms						

23.4.1 Furnishing	UFAS- In the bedroom/s: <ul style="list-style-type: none">One of the short sides of the bed <i>shall</i> (546) be designated as the head of the bed and that short side <i>shall</i> (547) be placed against a wallOf the three remaining sides two <i>shall</i> (548) have a minimum of twelve inches (12”) between the bed and the nearest wall The final side of the bed (one of the long edges) <i>shall</i> (549) have open access of thirty-six inches (36”) from the nearest wall	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.4.2 Closets	UFAS- Closets <i>shall</i> (550) be on an accessible route and <i>shall</i> (551) be in compliance with UFAS 4.34.2(8) and 4.25.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.4.3 Telephone and Cable Television outlets	UFAS – Cable television and telephone jacks <i>shall</i> (552) be in compliance with UFAS 4.27 for controls and operating mechanisms. The telephone jacks <i>shall</i> (553) have unobstructed access and be located on the accessible route. The cable outlet <i>shall</i> (554) have unobstructed access and be located on the accessible route.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.4.4 Turning Space	The bedrooms <i>shall</i> (555) contain a turning space complying with UFAS 4.2.3.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.5 Additional Requirements for UFAS Unit: Bathroom						
23.5.1 Shower and Tub	UFAS units <i>shall</i> (556) be equipped with; an accessible bathtub, a 36” x 36” transfer shower, or a roll in shower (30” x 60” minimum), with no threshold or curve. The contractor <i>shall</i> (557) install a shower / bathtub combination complying with UFAS 4.20 bathtubs; or a shower stall complying with UFAS 4.21	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Grab bar <i>shall</i> (558) be provided and <i>shall</i> (559) comply with either 4.20.4 where bathtubs are provided or with 4.21.4 where showers are provided.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

		The contractor <i>shall</i> (560) insure that the UFAS shower does not allow water to flow out from the base if a roll in shower is used properly. This may include the use of a compressible rubberized “bumper” to act as a water dam. The “bumper” <i>shall</i> (561) comply with UFAS 4.5.2 when compressed.	3 bedroom					
			2 bedroom					
			1 bedroom					
			Express unit					
			The shower <i>shall</i> (562) be installed in accordance with the shower manufacturer’s instructions.	3 bedroom				
				2 bedroom				
				1 bedroom				
				Express unit				
		The manufactured home <i>shall</i> (563) include a curtain rod.	3 bedroom					
			2 bedroom					
			1 bedroom					
			Express unit					
23.5.2 Commode	The water closet (toilet) <i>shall</i> (564) comply with UFAS 4.34.5.2.	3 bedroom						
		2 bedroom						
		1 bedroom						
		Express unit						
23.5.3 Bathroom in Lavatory	The vanity counter and lavatory <i>shall</i> (565) comply with UFAS 4.19. Lavatories, (sinks) and their countertops <i>shall</i> (566) be wall-supported.	3 bedroom						
		2 bedroom						
		1 bedroom						
		Express unit						
Cabinet ry/Light ing and Accessory	At least one shelf of the medicine cabinet <i>shall</i> (567) comply with UFAS 4.25. The toilet paper dispenser <i>shall</i> (568) comply with 4.34.5.2(4).	3 bedroom						
		2 bedroom						
		1 bedroom						
		Express unit						
23.5.5 Accessible le/UFAS Unit	The bathroom <i>shall</i> (569) contain a turning space complying with UFAS 4.2.3. Plumbing controls, including faucet assemblies and shower spray units <i>shall</i> (570) comply with relevant provisions of UFAS 4.16 to 4.24 and 4.27.	3 bedroom						
		2 bedroom						
		1 bedroom						
		Express unit						
23.6 Additional Requirements for UFAS unit Hallways								
23.6.1 UFAS Hallway width and Door openings	All hallways <i>shall</i> (571) be a minimum of thirty-six inches (36”) wide. All hallways <i>shall</i> (572) be UFAS compliant and all interior doors <i>shall</i> (573) provide a thirty-two inches (32”) clear opening and comply with UFAS 4.13. The door maneuvering clearances requirements in UFAS 4.13.6 may require hallways to be wider than 36 inches at some doorways.	3 bedroom						
		2 bedroom						
		1 bedroom						
		Express unit						
23.7 Additional Requirements for UFAS unit: Electrical								

23.7.1 Interior Lighting	All light switches <i>shall</i> (574) be compliant with UFAS 4.27. Where receptacles or switches are above obstructions, including countertops, they <i>shall</i> (575) be located a maximum of forty-four inches (44”) above the finished floor and <i>shall</i> (576) meet the requirements for an obstructed side reach in UFAS 4.2.6.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.8 Additional requirements for UFAS unit. Plumbing						
g Controls and Faucet	Plumbing controls, including faucet assemblies and shower spray units <i>shall</i> (577) comply with relevant provisions of UFAS 4.16 to 4.24 and 4.27.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.9 Additional Requirement’s for UFAS unit: Accessible/Controls						
23.9.1 Controls and Operating Mechanisms	All controls <i>shall</i> (578) comply with UFAS 4.1 and UFAS 4.27. Switches and electrical receptacles or other controls on walls over kitchen counters <i>shall</i> (579) be within the reach ranges specified in UFAS 4.2.6 for an obstructed reach. Controls include but are not limited to: cable television and telephone jacks, electrical receptacles, thermostats, and light and fan switches.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.10. Additional Requirements for UFAS unit: Interior Floor Coverings						
23.10.1 Floor Coverin gs	Floor surfaces <i>shall</i> (580) meet UFAS 4.5. The mat provided at each entrance <i>shall</i> (581) comply with UFAS 4.5.3.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.11 Additional Requirements for UFAS unit: Fixtures and Receptacles						
23.11.1 Interior Recepta cles	All receptacles <i>shall</i> (582) meet UFAS requirements	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.12 Additional Requirements for UFAS unit : Safety Equipment						
23.12.1 Fire Extingui sher	A fire extinguisher mounted on the wall <i>shall</i> (583) not protrude more than 4” from the wall surface if the bottom is more than 27 inches the floor. The top of the fire extinguisher <i>shall</i> (584) be at a maximum of 48 inches above the floor.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
23.13 Additional Requirements for UFAS unit: NOAA Weather Radios						
23.13.1 NOAA Weather Radios	ALL NOAA weather radios <i>shall</i> (585) be compliant with UFAS 4.1 and UFAS 4.28	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

23.14 Additional Requirements for UFAS unit: Access System Doors						
23.14.1 Interior Doors	The interior doors <i>shall</i> (586) comply with UFAS 4.13. Interior doors <i>shall</i> (587) have lever hardware that allows to be operable with only one hand and <i>shall</i> (588) not require tight gasping, pinching, or twisting of the wrist and <i>shall</i> (589) comply with UFAS 4.27	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Where pocket doors are provided in accessible units, the lever hardware on both sides of door <i>shall</i> (590) extend two inches (2”) from door surface, <i>shall</i> (591) have one and one-half inch (1.5”) clearance on each side of handle, and <i>shall</i> (592) be compliant with UFAS 4.34, UFAS 4.27 and UFAS 4.13.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
24.0 Manufactured Home Keys						
24.1 Unit Key	The contractor <i>shall</i> (593) furnish three (3) sets of keys for homes procured. Keys <i>shall</i> (594) be secured on a rust-proof ring or wire. The unit keys <i>shall</i> (595) have an identification tag with the manufactured home serial / VIN number on one side and space for the bar code on the other side.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The contractor <i>shall</i> (596) furnish three (3) sets of keys for each lock, if different, for each manufactured home procured. Keys shall (597) be secured on a rust-proof ring or wire. The unit keys <i>shall</i> (598) have an identification tag with the manufactured home serial / VIN number on one side and space for the bar code on the other side.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
24.2 Water Heater Compartment Standard Key	Manufacturer <i>shall</i> (599) secure the compartment door utilizing a “SCHLAGE” brand 6-pin Everest cylinders in C123 keyway (dead bolt lock), that <i>shall</i> (600) be keyed to a 6 pin combination. The key combination <i>shall</i> (601) be 746105. This key combination <i>shall</i> (602) not be used anywhere else in the manufactured home or in the master key set.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	24.3 Master Keys	Master keys <i>shall</i> (603) be provided and packaged separately from unit keys. The master key <i>shall</i> (604) have an identification tag stating the serial number range that the key works on.	3 bedroom			
2 bedroom						
1 bedroom						
Express unit						
25.0 Testing Requirements						
n g R e	The following additional tests <i>shall</i> (605) be required prior to delivery and may	3 bedroom				

	be witnessed at the discretion of the Government. <ul style="list-style-type: none"> • The drainage and vent system and the plumbing fixtures • The electrical system • HVAC system • Documentation explaining mold resistance measures taken 	2 bedroom				
		1 bedroom				
		Express unit				
	Water piping <i>shall (606) be</i> tested appropriately for the type of piping used. When the manufactured home is delivered to FEMA the entire water system <i>shall (607) be</i> dry without any water in it or with using adequate amounts of RV Antifreeze as a precautionary measure to insurance against freezing in extreme conditions. The Contractor <i>shall</i> add labels that the unit is winterized using RV antifreeze and provide instructions on how to “un-winterize” the unit to be used safely to house disaster survivors	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				





26.0 Labels and Unit Identification

26.1 Unit Designated Number	All units <i>shall (608)</i> have a unit designation number as described below. The “FEMA Designated Number” is composed from information provided by FEMA and by the manufacturer, which uniquely identifies the unit.			3 bedroom																									
				2 bedroom																									
				1 bedroom																									
				Express unit																									
	The number <i>shall (609)</i> be as follows: <table><tr><th>Descriptor</th><th>Source</th><th>Example</th></tr><tr><td>Last two digits from the year the contract was awarded</td><td>FEMA</td><td>14</td></tr><tr><td>Last four digits from contracted firm’s contract number</td><td>FEMA</td><td>1000</td></tr><tr><td>Four character abbreviation assigned to contracted firm</td><td>FEMA</td><td>ABCD</td></tr><tr><td colspan="3">Hyphen</td></tr><tr><td>Last two digits from the year the task order was awarded</td><td>FEMA</td><td>13</td></tr><tr><td>Last two digits from contracted firm’s task order</td><td>FEMA</td><td>01</td></tr></table>			Descriptor	Source	Example	Last two digits from the year the contract was awarded	FEMA	14	Last four digits from contracted firm’s contract number	FEMA	1000	Four character abbreviation assigned to contracted firm	FEMA	ABCD	Hyphen			Last two digits from the year the task order was awarded	FEMA	13	Last two digits from contracted firm’s task order	FEMA	01	3 bedroom				
				Descriptor	Source	Example																							
				Last two digits from the year the contract was awarded	FEMA	14																							
				Last four digits from contracted firm’s contract number	FEMA	1000																							
				Four character abbreviation assigned to contracted firm	FEMA	ABCD																							
				Hyphen																									
				Last two digits from the year the task order was awarded	FEMA	13																							
	Last two digits from contracted firm’s task order	FEMA	01																										
	2 bedroom																												
1 bedroom																													

	number								
	Unique code assigned to requirement version	FEMA	BA						
	Quantity of bedrooms	Manufacturer	2						
	UFAS Type (U = UFAS, N = Non-UFAS)	Manufacturer	U						
	Hyphen								
	Incremental number assigned to each MHU produced under task order	Manufacturer	0056						
	Alpha letters assigned if options are exercised (e.g., S = sprinkler and/or W = shrink wrapped)	Manufacturer	SW						
	Example: 141000ABCD-1301AA2U-0056SW								
				Express unit					
26.2 Unit Identification	All units <i>shall (610)</i> be identified in accordance to the following:			3 bedroom					
	UNIT NUMBER PLACARD			2 bedroom					
	Unit number placard <i>shall (611)</i> be placed on Exterior left front corner of the unit, when facing the unit (tongue side).			1 bedroom					
	The Unit Number placard <i>shall (612)</i> be as follows:								
	<ul style="list-style-type: none"> • Include FEMA Unit Designation Number • Marking must be of a plain font (e.g. Arial); three inches (3”) high; black colored on white background; and must be reflective ASTM D4956 Type III or better • Placement must be within three inches (3”) from the bottom of the adjacent roof eave and no more than three inches (3”) from the left edge of the manufactured home 								
				Express unit					
	UNIT CONTACT PLACARD			3 bedroom					
	Unit Contact placard <i>shall (613)</i> be placed on the Interior side of front and back exterior doors, adjacent to upper peephole (top of the sign may not be any higher			2 bedroom					
				1 bedroom					

<div>than 66” above the finished floor), door handle side.</div> <div>The Unit Number placard <i>shall (614)</i> be as follows:</div> <div><ul style="list-style-type: none">Destructible Vinyl Sticker type (sticker must be applied so that it is level and plum with respect to the door edge)Black one inch (1”) high font, on white background, stating: “FEMA Owned & Maintained Unit Contact FEMA at 800-621-FEMA”The above line must be suffixed with one-half inch (½”) font stating, “(3362)”Blue three-quarters inch (¾”) high font, stating “Unit Barcode”; and approximately eight inches (8”) of space to write in (with permanent marker) FEMA Barcode number</div>																													
	Express unit																												
	3 bedroom																												
	2 bedroom																												
	1 bedroom																												
<div>UNIT SPEC PLACARD</div> <div>Unit Contact placard <i>shall (615)</i> be placed on Interior side of the water heater closet door, level, three inches (3”) from latch side. The top of placard <i>shall (616)</i> be five feet (5’) from bottom of the door.</div> <div>The Unit Data placard <i>shall (617)</i> be as follows:</div> <div><ul style="list-style-type: none">White background, dark blue border, half inch (½) in thickness“UNIT SPECS” in uppercase, blue half inch (½”) high font, centered</div> <div>Placard must list the information corresponding to the data labels listed below, in black one-quarter inch (¼”) high font:</div> <table><tr><td>FEMA Designated Unit Number</td><td colspan="3">(26 characters)</td></tr><tr><td>Manufacturer’s Serial Number</td><td colspan="3">(40 characters)</td></tr><tr><td>Contracted Manufacturer’s Name</td><td colspan="3">(40 characters)</td></tr><tr><td>Actual Manufacturer’s Name</td><td colspan="3">(40 characters)</td></tr><tr><td>Actual Manufacturer’s Address</td><td colspan="3">Address1 (40 characters) Address2 (40 characters)</td></tr><tr><td>Actual Manufacturer’s Phone</td><td>(12 characters)</td><td>Actual Manufacture Date</td><td>MM-DD-YY (8 characters)</td></tr></table>	FEMA Designated Unit Number	(26 characters)			Manufacturer’s Serial Number	(40 characters)			Contracted Manufacturer’s Name	(40 characters)			Actual Manufacturer’s Name	(40 characters)			Actual Manufacturer’s Address	Address1 (40 characters) Address2 (40 characters)			Actual Manufacturer’s Phone	(12 characters)	Actual Manufacture Date	MM-DD-YY (8 characters)					
FEMA Designated Unit Number	(26 characters)																												
Manufacturer’s Serial Number	(40 characters)																												
Contracted Manufacturer’s Name	(40 characters)																												
Actual Manufacturer’s Name	(40 characters)																												
Actual Manufacturer’s Address	Address1 (40 characters) Address2 (40 characters)																												
Actual Manufacturer’s Phone	(12 characters)	Actual Manufacture Date	MM-DD-YY (8 characters)																										

	FEMA Requirement Code	(3 characters)	FEMA Climate / Color	(10 characters)					
	Length (feet)	(6 characters)	Width (feet)	(4 characters)					
	Height (feet)	(4 characters)	Fully loaded Weight (lbs)	(6 characters)					
	UFAS	Yes / No (3 character)	Number of Axles/Tires	(4 characters)					
	Tire type/ recommended psi for transport	(10 characters)	Axle rating, each (weight in lbs)	(5 characters)					
	Thermal (U/O) Zone	(1 character)	Livable area (Square feet)	(3 characters)					
	Wind Zone	(1 character)	Roof Load Zone	(2 characters)					
	Electrical System (amps / volts)	(7 characters)	Electrical Supply (# wires / # avg)	(3 characters)					
	Water Heater Size (gallons)	(2 characters)	Water Heater Manufacturer	(40 characters)					
	HVAC Manufacturer	(40 characters)	HVAC Size (rated tons)	(3 characters)					
	HVAC Heat Strip Size (amps)	(3 characters)	Other 1	(40 characters)					
	Siding Manufacturer	(40 characters)	Siding Color	(10 characters)					
	Exterior Doors (rating / size)	(10 characters)	Windows (U factor)	(2 characters)					
	# of Bedrooms	(1 character)	# of Bathrooms	(1 character)					
26.3 Unit Barcode	The UNIT SPEC PLACARD <i>shall</i> (618) have barcodes containing the same information as specified above (table). The Barcodes <i>shall</i> (619) be part of the UNIT SPEC PLACARD.				Express unit				
					3 bedroom				
					2 bedroom				
					1 bedroom				
MFG SERIAL NUMBER		FEMA DESIGNATED UNIT NUMBER							

	 ab123 (code 39)	 ab123 (code 39)					
	INFORMATION FROM UNIT DATA PLACARD  (PDF-417)	INFORMATION FROM UNIT DATA PLACARD  (Datamatrix)					
	BARCODE INFORMATION <ul style="list-style-type: none"> Manufacturer Serial Number This CODE 39 type barcode <i>shall</i> (620) be encoded with the Manufacturer's serial number assigned, and it <i>shall</i> (621) match the serial numbers affixed or identified on other areas of the Manufactured Unit. The barcode <i>shall</i> (622) be only alphanumeric. FEMA Designated Unit Number This CODE 39 type barcode <i>shall</i> (623) be encoded with the FEMA designated unit number (as explained above). The number <i>shall</i> (624) match the number printed on the Unit Data Placard. The barcode <i>shall</i> (625) have be only alphanumeric, no dashes. Information from Unit Spec Placard (PDF-417) This PDF-417 type barcode <i>shall</i> (626) be encoded with comma delimited information from the Unit Data Placard. Symbols (dashes and back slashes) are to be used. No commas in data fields may be used (e.g. numeric to denote thousands). The data <i>shall</i> (627) be encoded in the order listed below. Data only – no data labels – will be included. Blank fields are included, but can be blank (denoted with just a comma). Information from Unit Spec Placard (Datamatrix) This Datamatrix type barcode <i>shall</i> (628) be encoded with comma delimited information from the Unit Data Placard. Symbols (dashes and back slashes) are to be used. No commas in data fields may be used (e.g. numeric to denote thousands). The data <i>shall</i> (629) be encoded in the order listed below. Data only – no data labels – will be included. Blank fields are 		Express unit				
			3 bedroom				
			2 bedroom				
			1 bedroom				

	<p>included, but can be blank (denoted with just a comma).</p> <p>Comma delimited order</p> <p>FEMA Designated Unit Number, Manufacturer's Serial Number, Contracted Manufacturer's Name, Actual Manufacturer's Name, Actual Manufacturer's Address1, Actual Manufacturer's Address2, Actual Manufacturer's Phone, Actual Manufacture Date, FEMA Requirement Code, FEMA Climate / Color, Length, Width, Height, Fully Loaded Weight, UFAS, # of Axles / Tires, Tire Type / Recommend PSI for Transport, Axle Rating Each, Thermal Zone, Livable Area, Wind Zone, Roof Load Zone, Electric System, Electric Supply, Water Heater Size, Water Heater Manufacturer, HVAC Manufacturer, HVAC Size, HVAC Heat Strip Size, Other1, Siding Manufacturer, Siding Color, Exterior Doors, Windows, # of Bedrooms, # of Bathrooms</p>					
26.4 Manufactured Home Serial Number	Contractor <i>shall</i> (630) stencil in a contrasting color two inch (2") high font the manufacturer's serial number on the tongue. The stencil <i>shall</i> (631) be painted in such a location that it will not obscure the stamped serial number. The serial number stenciled <i>shall</i> (632) match the stamped serial number and serial number on the HUD data plate.	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
26.5 Labels	<p>Contractor <i>shall</i> (633) affix a permanent indicator to identify the following :</p> <ul style="list-style-type: none"> • Support Placement Location (piers, jack stands, etc.) for long term storage, • Blocking Location for Installation, • Fresh Water Inlet Location <p>The Jack stand label <i>shall</i> (634) include the minimum quantity of jacks required per I- Beam . Also, it <i>shall</i> (635) indicate how many jacks are needed to change the tire.</p> <p>The Contractor <i>shall</i> (636) affix labels if the unit is winterized using RV antifreeze. The Contractor <i>shall</i> (637) provide instructions on how to “de-winterize” the unit to be used, safely to house disaster survivors</p>	Express unit				
		3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
MHU Task Order Options						
O1 Shrink Wrap						
O1.1 Shrink Wrap	Contractor <i>shall</i> (O1.1) provide a Shrink wrap, A Shrink wrap is a low density polyethylene film made from fractional melt resin and other additives. Shrink wrapping the manufactured homes will mitigate against wear and tear during transport and storage. The shrink wrap <i>shall be</i> completed prior shipping the unit.	3 bedroom				
		2 bedroom				
		1 bedroom				

	If an MH is shrink wrapped, the damage caused, by the shrink wrap to the unit, does not have to be covered by the contractors warranty. .					
		Express unit				
O1.2 Material Description	<p>The Shrink warp material <i>shall</i> (O1.2) meet the following:</p> <p>Industry Standards</p> <ul style="list-style-type: none"> • ASTM D4397-91 • ASTM D4635-91 Type 1, 2 & 3; Surface 2; Finish 1 <p>Government Standards</p> <ul style="list-style-type: none"> • Federal Specification LP-378** Type 1 & 2; Class 1; Grade B; Finish 1 • Federal Specification LP-390 Type 1; class L; Grade 1 or 2; Category 4 • Federal Specification LP-512 Type 1; Class L; Grade 1 or 2 <p>Material Performance</p> <ul style="list-style-type: none"> • 100% virgin resin material with extremely consistent mil thickness and opacity • Ultraviolet Inhibitors to ensure two (2) year protection against UV • EVA (ethyl vinyl acetate) content should ensure a two (2) year durability protection • Minimize heat collection in warm southern climates • Ideally Meets NFPA 701 	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
O1.3 Coverage	Shrink wrap <i>shall</i> (O1.3) cover the unit and form a complete seal from the roof to the bottom frame of the unit. The bottom of the unit should not be wrapped.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
O1.4 Durability	Shrink wrap application <i>shall</i> (O1.4) not damage units. Any part of the unit that might be damaged by the pressure of shrink wrap <i>shall</i> (O1.5) be appropriately protected by disposable padding, framing, or reinforcement. Units <i>shall</i> (O1.6) not be damaged by the application of the wrap, protection padding, or framing for the shrink wrap.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Shrink wrap <i>shall</i> (O1.7) be of sufficient thickness to mitigate typical transport and storage hazards. This includes but is not limited to damage to shingles caused	3 bedroom				
		2 bedroom				

	by winds during transport, small road debris chipping or scarring the exterior of the unit, and water intrusion that occurs from prolonged unprotected exposure to the elements.	1 bedroom				
		Express unit				
01.5 Banding	The contractor <i>shall</i> (01.8) insure that there is sufficient banding so that the shrink wrap is able to sustained multiple trips and up to two (2) years in storage.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The banding <i>shall</i> (01.9) be a minimum of the standard three-quarters inch ($\frac{3}{4}$ "') coated nylon / fabric product.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
01.6 Ventilation	<p>In the absence of independent documentation to demonstrate appropriate ventilation, ventilation <i>shall</i> (01.10) be provided to minimize microbial growth.</p> <p>Active Ventilation</p> <p>The manufacturer <i>shall</i> (01.11) include either solar ventilation or wind vent fans. Fans should be placed in front of two (2) windows on opposite sides (long side) of the units.</p>	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	<p>Passive Ventilation</p> <p>The manufacturer <i>shall</i> (01.12) include two (2) passive vents on each long side of the unit and one (1) passive vent on short side. All passive vents should be placed below any proud object (e.g. HVAC). Vents should be place no higher than eight feet (8') above ground.</p>					
01.7 Access "Doors"	To allow a full size person the ability to enter and exit the unit, a standard full size zipper door <i>shall</i> (01.13) be provided. To maximize the ease of entry and exit, the shrink wrap door will be installed so that when the shrink wrap door is opened the door will drop to the ground.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The shrink wrap "door" <i>shall</i> (01.14) be placed immediately in front of the manufactured home front door so that access to the manufactured home is not impaired.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
01.8	To maximize longevity, all shrink wrap welds <i>shall</i> (01.15) be reinforced with	3 bedroom				

	shrink wrap tape. Any holes in the wrap <i>shall (01.16)</i> be patched with shrink wrap tape. Any large shrink wrap patch <i>shall (01.17)</i> be reinforced on the exterior and interior side of the wrap with shrink wrap tape	2 bedroom				
		1 bedroom				
		Express unit				
	The front of the manufactured home unit (tongue side) <i>shall (01.18)</i> have maximum reinforcements to mitigate wind and road damage during transport.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
01.9 Marking	<p>The shrink wrap <i>shall (01.19)</i> have marking identifiers as follows within six inches (6”) laterally from the actual location:</p> <ul style="list-style-type: none"> • Electrical service connection • Water service connection • Sewer connection 	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
01.10 Identification	<p>To maximize identification, the exterior of the shrink wrap <i>shall (01.20)</i> have the manufactured home identification information printed in black Three inch (3”) high font, on white background; located on left front corner (facing tongue, left side); approximately two feet (2’) from bottom of roof line.</p> <p>The information displayed <i>shall (01.21)</i> include:</p> <ul style="list-style-type: none"> • Contracted Firm’s Name • Manufacturer’s Serial # of the Unit have to match the manufactured home) • FEMA’s unit identification number • Manufacturer (production facility) and Date of Manufacture • Quantity of bedrooms (formatted to say “Bedrooms=” and number of bedrooms) • UFAS status (formatted to say “UFAS=” and status) • Sprinkler Status (stated only if unit has sprinkler, and formatted to say “Sprinkler=” and status) • Color of Siding (formatted to say “Color=” and color) • Manufacturer’s Model Number (formatted to say “Mfg Model=” and manufacturer model #) • Unit requirements <ul style="list-style-type: none"> ○ Size information (formatted to say “ground height=” and “maximum width=” and “maximum length=”) ○ Gross weight (with furniture, formatted to say “Weight=” and actual weight) • FEMA Barcode (with space for FEMA to write in the number) 	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

01.11 Recycling	Manufacturer <i>shall</i> (01.22) provide three (3) reusable bags for the return and recycling of shrink wrap to a qualified and reliable recycler (to recycle the shrink wrapping).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The reusable bags <i>shall</i> (01.23) be able to be shipped by common carrier. At a minimum, the bag <i>shall</i> have postage and address ready for easy shipment. In larger operations, the manufacturer may decide to collect the reusable bags (with shrink wrap) and transport them to the recycler as a lot.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
02: Weekly Storage						
02.1 Weekly Storage	When FEMA orders manufactured homes, the Agency may require that the contractor store the manufactured homes at the contractor’s location. This may result from a number of logistical issues including but not limited to: delays in construction of FEMA group sites; dispatch or receiving activity at FEMA’s Manufacturing Housing Storage Sites; or delivery and dispatch activity at disaster Manufacturing Housing Staging Areas. When FEMA requires the contractor to store manufactured homes, the contractor will be compensated for storing the manufactured home in one week increments, even if FEMA allows for shipping of the manufactured home prior to the end of the week. <u>Weekly Storage <i>shall</i> (02.1) be calculated as follows</u> 1. The day that FEMA requests that the manufacturer start storing manufactured homes <i>shall</i> (02.2) become the weekly anniversary date. 2. The formula that <i>shall</i> (02.3) be used is: Remaining Unshipped from Previous Week Storage (R) plus all production (P) minus all shipments (S) equals Weekly Inventory (WI). $R + P - S = WI$ 3. The WI from a completed week becomes the R for the following week. <u>Examples:</u> This is the first week that FEMA requests that the manufacturer store units at the manufacture’s site. The production rate is 125 units per week. FEMA requests that 25 units are shipped within the same week.	3 bedroom				
		2 bedroom				
		1 bedroom				

	<p>R – the residual from the previous week – is 0 P – the amount added during the week – is 125 S – the amount shipped during the week – is 25</p> <p>$R + P - S = WI \quad \quad 0 + 125 - 25 = 100$</p> <p><i>The weekly inventory at the end of the first week totals 100.</i></p> <p>During the second week, FEMA requests that production remain the same and no units are shipped.</p> <p>R – the residual (or WI) from the previous week – is 100 P – the amount added during the week – is 125 S – the amount shipped – is 0 WI – the weekly inventory – is 225</p> <p><i>The weekly inventory at the end of the second week totals 225.</i></p>					
		Express unit				
O3 Jack Stands and ABS Foundation Pads						
O3.1 Piers(Jack Stand)	As an option, per FEMA request, the manufacturer <i>shall (O3.1)</i> provide adjustable steel piers that are capable of transmitting the vertical live and dead loads of the Manufacturing Housing Unit safety to the footings or foundation below..	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Adjustable Steel Piers provided <i>shall (O3.2)</i> be Commercial of the shelf (COTS) products and <i>shall (O3.3)</i> be capable of sustaining the required vertical load capacity. Adjustable steel piers <i>shall (O3.4)</i> be listed or labeled for the required vertical load capacity, and, where required by design, for the appropriate horizontal load capacity.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Adjustable steel pier heights <i>shall (O3.5)</i> be selected so that the adjustable risers have a minimum of 2 in (50 mm) height adjustment when finally positioned. Adjustable steel piers <i>shall (O3.6)</i> be corrosion resistant and capable of withstanding severe weather at storage/staging locations.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	Alternative: FEMA reserve the right to provide additional specifications for the	3 bedroom				

	Jack stands if the proposed solution by the vendor does not meet FEMA needs.	2 bedroom				
		1 bedroom				
		Express unit				
O3.2 ABS Foundat ion Pad	As an option, per FEMA request, the manufacturer <i>shall</i> (O3.7) provide squared (24” by 24”) ABS Foundation Pads for each pier for the applicable Manufactured home storage area.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
O3.3 Heavy Duty Jack Stand	The HDJS shall (O3.8) be capable of transmitting and sustaining the vertical live and dead loads of the MHU safely to the footings or foundation below the jack stand.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The HDJS shall (O3.9) be a screw-type jack stand that is adjustable from 19 inches to 31 inches of height. The height shall (O3.10) be measured from the base of the jack stand to the flat portion of the jack stand that is designed to support the MHU and shall (O3.11) be the working height of the jack stand not the maximum extension.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The HDJS shall (O3.12) be rated to hold a minimum of 18,000 pounds not including the safety factor and shall (O3.13) be able to sustain the rated weight for the operational range (19 inches to 31 inches in height). The jack stand shall (O3.14) have an appropriate locking mechanism that will hold the jack stand extension (adjustable portion) in place when it is set to a working height between 19 inches and 31 inches.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand s shall (O3.15) be easy to install and easy to move and remain stable once placed and adjusted. All joints shall (O3.16) be welded. Bolts shall (O3.17) not be used to connect static (non-moving) parts.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand shall (O3.18) have a stable base that allows the jack stand to be placed on flat surfaces. The stable base shall (O3.19) permanently attached so that the base of the jack stand lays flat on the contact surface: flat terrain (i.e. Concrete, Asphalt, gravel) or ABS pads	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand shall (O3.20) be easily adjustable having permanent handles or other mechanisms that will allow for simple and quick adjustment to the desired	3 bedroom				
		2 bedroom				

	height.	1 bedroom				
		Express unit				
	The jack stand shall (O3.21) be designed so it can be attached to the frame of the MHU. The connection between the jack stand and the MHU shall be called the head or head plate. The head shall (O3.22) be appropriate to support the MHU without the need for any type of blocking or cribbing and it shall (O3.23) contain the appropriate head to allow lifting and leveling the MHU without any modification	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand shall (O3.24) be designed to be carried and operable by one person without any assistance. The jack stand shall (O3.25) be safe (i.e. free of sharp edges with rounded edges and corners, with all surfaces being smooth, etc.), for the users.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The HDJS shall (O3.26) be corrosion resistant, be operable in a variety of weather conditions, and withstand typical weather conditions at FEMA's primary MHU storage sites located in Selma, AL and Cumberland, MD.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand shall (O3.27) remain usable, operable and do not degrade functionality or structure for a period of not less than 15 years with minimal maintenance (i.e. lubrication).	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				
	The jack stand shall (O3.28) meet appropriate safety standards as defined and published by ANSI/ASTM. The jack stand shall (O3.29) have appropriate rating/testing information.	3 bedroom				
		2 bedroom				
		1 bedroom				
		Express unit				

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END OF ATTACHMENT 3